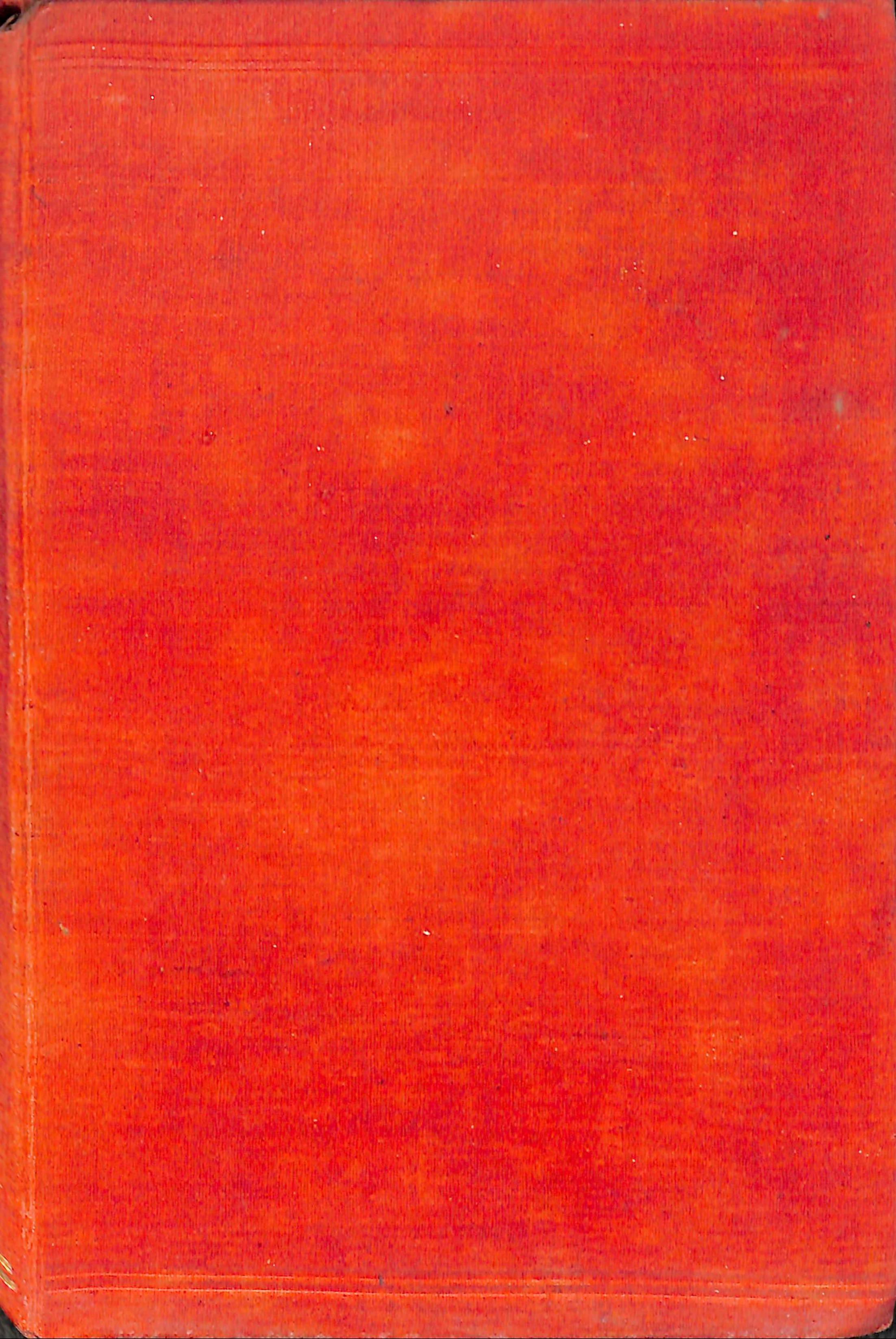
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A
PRIMER OF INDIAN LOGIC

A Primer of Indian Logic

ACCORDING TO

ANNAMBHAṬṬA'S TARKASAṀGRAHA

BY
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SECOND EDITION

THE
KUPPUSWAMI SASTRI RESEARCH INSTITUTE
MYLAPORE, MADRAS
1951

First Edition—1932
Second Edition—1951

PRINTED AT
THE MADRAS LAW JOURNAL PRESS
MYLAPORE, MADRAS

PREFACE TO THE FIRST EDITION

काणादं पाणिनीयं च सर्वशास्त्रोपकारकम्

Kāṇādaṁ Pāṇinīyaṁ ca sarvaśāstropakārakam.

"Logic and grammar are indispensable aids for every branch of knowledge."

This little book, called A PRIMER OF INDIAN LOGIC, is primarily based on Annambhaṭṭa's Tarkasaṁgraha and is designed to serve as an introduction, not only to the study of Indian logic as embodied in the Nyāya-Vaiśeṣika literature in Sanskrit, but also to the study of Indian philosophy in its diverse systems. In preparing this book, the oft-quoted Sanskrit dictum given above was borne in mind. This book comprises three parts. Part I contains an historical introduction. Part II gives the Sanskrit text of the Tarkasaṁgraha in the Devanāgarī script and in English transliteration. Part III forms the bulk of this work and contains an English rendering of the Sanskrit text accompanied by a critical and comparative exposition of each topic in English. In this exposition, an endeavour is made to combine strict fidelity to the original Śāstraic texts in Sanskrit with an intelligible presentation of the technical ideas of Indian systems of philosophy in an English garb. In the course of this endeavour, it has become unavoidably necessary to coin and bring into vogue certain technical terms, which, at first sight, look somewhat uncouth.

Nearly two years ago, I undertook to write this book for the benefit of modern University students, more especially B.A. students offering philosophy as their optional subject, in compliance with a suggestion made by my esteemed friend, Prof. P. N. Srinivasachariar, M.A., Professor of Philosophy in the Pachaiyappa's College, Madras. Messrs. P. Varadachari & Co., Publishers and Book-sellers, 8, Linga Chetty Street, Madras, kindly undertook to publish this work. The printing of parts II and III was finished in January 1931 and these two parts were separately made available to students in the beginning of 1931. The complete work, with part I also and a very useful Sanskrit glossary, is now made available in a complete form; and in this form, it is hoped that it will be received well by all the students and scholars interested in Indian philosophy.

The bulk of the matter in this book is directly based on Śāstraic texts in Sanskrit. In the course of the preparation of this work, I consulted well-known English books on Indian philosophy like Prof. Radhakrishnan's 'Indian Philosophy', Dr. Keith's 'Atomism and Indian Logic', and Dr. Randle's 'Indian Logic in the Early Schools'. My thanks are due, in particular, to two of my young friends and former pupils—to Mr. T. R. Chintamani, M.A., Senior Lecturer in Sanskrit, Madras University, for preparing the table of contents and the Sanskrit glossary, and to Mr. T. Chandrasekharan, M.A., (Diploma in German), Professor of History of Sanskrit Language and Literature, Madras Sanskrit College, and Manager, Journal of

Oriental Research, Madras, for reading the proofs. I should also take this opportunity to express my thankfulness to the Madras Law Journal Press, Mylapore, for its very kind and efficient co-operation in seeing this work through the press and to Pandit T. S. Subrahmanya Sastri (Sāhitya-Ṣiromaṇi) of the M.L.J. Press for the alert and willing assistance which he rendered at various stages in getting me to do the work in the midst of my multifarious duties.

S. KUPPUSWAMI SASTRI

5, North Mada Street, Mylapore,
11th March, 1932.

PREFACE TO THE SECOND EDITION

The authorities of the Kuppuswami Sastri Research Institute have great pleasure in bringing out this second edition of the *Primer of Indian Logic* by Prof. S. Kuppuswami Sastri, and publishing it on the occasion of the Seventh Foundation Day celebrations of the Institute founded in the name of the author.

Dr. A. Sankaran, M.A., PH.D., and Dr. V. Raghavan, M.A., PH.D., were in charge of the work of bringing out this second edition.

The corrections noted by the author in his own copy of the book preserved in the Institute Library have been incorporated here.

Sri K. Venkateswara Sarma, M.A., was of much assistance in the reading of the proofs and seeing the work through the press.

The thanks of the Institute authorities are specially due to Sri N. Ramaratnam, M.A., B.L., Proprietor, M. L. J. Press, for his continued co-operation in the work of the Institute.

7th Sept. 1951.

TABLE OF TRANSLITERATION

—	Consonants	Aspirate, semivowels, sibilants, anusvāra and visarga	Vowels	Diphthongs
Gutturals ..	क् k, ख् kh, ग् g, घ् gh, ङ् ṅ	ह् h	अ a, आ ā	ए e, ऐ ai
Palatals ..	च् c, छ् ch, ज् j, झ् jh, ञ् ñ	य् y, श् ś	इ i, ई ī	
Linguals ..	ट् ṭ, ठ् ṭh, ड् ḍ, ढ् ḍh, ण् ṇ	र् r, ष् ṣ	ऋ ṛ, ॠ ṝ	
Dentals ..	त् t, थ् th, द् d, ध् dh, न् n	ल् l, स् s	ऌ ḷ	
Labials ..	प् p, फ् ph, ब् b, भ् bh, म् m	व् v	उ u, ऊ ū	ओ o, औ au
		ं ṁ		
		ः ḥ		

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॥ श्रीः ॥

॥ तर्कसंग्रहः ॥

A PRIMER OF INDIAN LOGIC

PART I

INTRODUCTION

SECTION I

Preliminary: Logic in the West and in India

In *the cultural history of Europe*, over twenty-two centuries ago, thinking, like speaking, needed an elucidative and regulative aid and found it in a distinct branch of investigation, which was founded and organised in Greece by Aristotle and which came to be designated *Logic*. It is significant that the name *logic* is etymologically connected with the Greek word *logos*, which denotes both 'thought' and 'word' or 'discourse'. The significance of this etymological connection can be adequately appreciated if it is remembered that *logic*, in its rise and development in the western world, particularly in Greece, was closely connected with *rhetoric*. Thus the name *logic* is of a tell-tale character in its application to logic in the West; and it may be taken to indicate how, almost from its very rise, western logic found itself in the firm grip of formalism and how it took more than twenty centuries for the scientific method underlying Aristotle's *Organon* to be redeemed, brought into prominence and implemented in the *Novum Organum* of Francis Bacon (1561-1626). The term *logic* should not be taken to carry with it all these implications of European history when it is used in the phrase *Indian logic*. This phrase is usually rendered by the Sanskrit equivalents—*ānvīkṣikī*

nyāyavistara, nyāyadarśana, tarkaśāstra and *pramāṇaśāstra.* It is also usual to describe *Indian logic* by the anglicised phrase *Nyāya-Vaiśeṣika system* and it is usually described thus in this work. All these phrases are significant and appropriate in one way or other, particularly in view of the place which Indian logic occupies in *the cultural history of India* and of the manner in which it arose and grew—not as a *mere grammar of thinking,* but as an orthodox (*āstika*) system of philosophy with a special stress on the science of methodical reasoning in both its inductive and deductive aspects, this science forming its dominant and distinctive part. Indian logic is *ānvīkṣikī* or *nyāyavistara* or *nyāyadarśana* in the sense that it is a philosophical system, of which methodical reasoning or investigation of knowledge got through observation or perception and trustworthy verbal testimony forms the central theme; it is pre-eminently the science of ratiocination or *tarkaśāstra*; and in contrast with the *padaśāstra* or 'the science of grammar' (*Vyākaraṇa*) and with the *vākyaśāstra* or 'the exegetics' (*Mīmāṁsā*), it is described as the *pramāṇaśāstra* or the epistemological science, chiefly concerned with valid knowledge and its sources. That Indian logic is usually described as the *Nyāya-Vaiśeṣika* system is not because it is the result of the *syncretism* of the two opposing systems—Nyāya realism and Atomistic pluralism; rather it is so described because at a very early stage in the history of Indian logic, the Vaiśeṣika stress on the *inductive* phase of inference came to be *synthesised* with its *deductive* phase in the Nyāya theory of syllogistic reasoning.

Those who are familiar with Western logic and desirous of studying Indian logic from a historical and comparative point of view will do well to bear in mind the fact that, while one may find striking parallels in the Indian and Western systems of logic, one should not be misled by such parallels and lose sight of the fundamental differences in respect of scope and method, which Indian logic discloses in its rise and development, as compared with Western logic.

SECTION II

ANTECEDENTS AND FORESHADOWINGS OF THE VAISESIKA AND NYAYA

The story of India's quest for truth and of India's attempts to lay out suitable ways and approaches to truth is long and varied and it has been reconstructed with a considerable measure of success by several eminent scholars, Indian and alien, from the ancient literary monuments of India, which are mostly in the form of Sanskrit works. In all this quest and these attempts, a careful student of the history of Indian philosophical thought may discern, almost from the very beginning, two tendencies—the *intuitionistic* and the *rationalistic*, and two chief aims—the achievement of *Dharma* and the realisation of *Brahman*. If one of the Ṛg-Vedic seers could be said to have boldly *intuited* the *monistic absolute* in the well-known verse "That *One* breathed breathlessly by itself" (*Ānīdavātaṁ svadhayā tadekam*: Rv. X.129.2), it would not be

far-fetched to find the rationalistic exhortation of another Ṛg-Vedic seer in the verse "Meet one another, discuss and understand your minds" (*Saṁgacchadhvaṁ saṁvadadhvaṁ saṁ vo manāṁsi jānatām*: Rv. X.191.2). These two tendencies came to exhibit themselves throughout the Vedic age, in close association with the two aims mentioned above. On one side, as a result of the influence of the rationalistic tendency on the ritualistic aspect of the Veda, ritualistic and exegetic doctrines, which, in due time, emerged as Jaimini's system of Pūrva-Mīmāṁsā, were developed. And, on the other side, the combined workings of the intuitionistic and rationalistic tendencies in the direction of spiritual insight and knowledge of truth led to the emergence of the Upaniṣadic philosophy of *Ātman*. This philosophy was marked by a pronounced emphasis on the efficacy and value of intuition, which culminated in Bādarāyaṇa's system of Vedānta. The dominant feature of the philosophy of the Upaniṣads is its monistic absolutism, which led up, within the Upaniṣadic period itself, to rationalistic reactions of different types, representing collateral and casual phases of Upaniṣadic thought—some of them coming to be systematised later on in the dualism and realism of Kapila's Sāṁkhya and the allied discipline of Patañjali's Yoga, some others eventually giving rise to the pluralistic rationalism of Kaṇāda's *Vaiśeṣika* system and its complementary *Nyāya* of Gautama, and yet others emerging as anti-Vedistic rebels in the form of the Jaina *may-be-ism* (*syādvāda*), the Bauddha idealism (*vijñānavāda*) and nihilism (*śūnyavāda*), and the

Cārvāka materialism. All these post-Upaniṣadic systems came to be called *darśanas* (*darśanāni*). It should be noted here that the term 'system' is very inadequate as the English equivalent of the Sanskrit word '*darśana*'. While the former word brings into prominence the idea of systematisation, the latter word brings into relief the fact that the plenary intuition of *truth* or *spirit* (*tattvadarśana* or *ātmadarśana*), whicl a gifted saint or seer came to have, lies at the *root* of every system of Indian philosophy and forms its *fruit* also. A long-established and widely accepted tradition classifies these *darśanas* into *āstika* and *nāstika*. The history of the meaning of these two words throws some light on the manner in which the ground of classification happened to be shifted under varying circumstances. Pāṇini's sūtra 4.4.60 (*asti nāsti diṣṭaṁ matiḥ*) gives the derivation of the words *āstika*, *nāstika* and *daiṣṭika*: and according to Pāṇini, *āstika* is 'one who believes in the other world', *nāstika* is 'one who does not believe in the other world' and *daiṣṭika* is a 'predestinarian' or 'fatalist'. This is the oldest recorded explanation of these words. On the basis of this explanation, even Jainism, and Buddhism in some of its aspects, could be described as *āstika* systems. An old popular tradition would take the word *āstika* in the sense of 'one who believes in God'. If this should be accepted, Jaimini's Pūrva-Mīmāṁsā and Kapila's Sāṁkhya, which are usually included in the *āstika* list, ought to be dropped from that list, as they do not recognise *Īśvara*. A post-Buddhistic, but pre-Christian, tradition fixed the meaning of the word *āstika* as 'one

who believes in the infallibility and the supreme authority of the Veda' and of the word *nāstika* as 'one who does not believe in it'. This tradition has been widely accepted for a long time. According to this, the Sāṁkhya and Yoga, the Vaiśeṣika and Nyāya, the Pūrva-Mīmāṁsā and Vedānta are described as *āstika-darśanas*, and the Cārvāka, Jaina and Bauddha systems as *nāstika-darśanas*. In this context, whenever the terms *orthodox* and *heterodox* happen to be used as the English equivalents of *āstika* and *nāstika*, it should be remembered that they have reference to belief and disbelief in the authority of the Veda.

Though the first beginnings of the Vaiśeṣika and Nyāya systems are misty in certain respects, a careful student is not likely to miss the foreshadowings of the central doctrine of these systems in the Upaniṣads. In the well-known three-fold scheme of self-culture leading to self-realisation, as taught in the oft-quoted Upaniṣadic text " Verily, Maitreyi, the *Spirit* should be *realised, heard, discussed* and *constantly contemplated upon*" (*Ātmā vā are draṣṭavyaś śrotavyo mantavyo nididhyāsitavyaḥ*—Bṛhad. IV. 5), it is generally accepted that hearing or initial comprehension (*śravaṇa*) represents the inaugural stage, investigation and discussion with the help of *reason* (*manana*) represent the central stage and constant contemplation (*nididhyāsana*) stands for the culminating stage. The grim spiritual teacher of the Kaṭhopaniṣad, *Death* (*Yama*), pulls up the rationalist of the Upaniṣadic age with the warning " Self-realisation cannot be got

through ratiocination or *tarka*" (*Naiṣā tarkeṇa matirā-paneyā*—Kaṭha II. 9). From these foreshadowings of deliberate attempts to exercise reason, when considered together with the fact that philosophical debates such as those that were carried on under the auspices of Ajātaśatru and Janaka were very common during the Upaniṣadic age, the inference is irresistible that, already during the period of the Upaniṣads, some logical doctrines should have not only begun to appear, but also progressed beyond the nebulous stage.

SECTION III

How the Vaisesika and Nyaya schools emerged and when their doctrines were redacted into sutras

Before the end of the Upaniṣadic period and prior to the advent of the Buddha, the Vedic scriptures embodying the results of the intuitive insight of the Vedic and Upaniṣadic seers had asserted their authority so far as to persuade a large section of rationalistic thinkers to agree to play second fiddle to scriptural authorities. This should have resulted in the development of the pre-Buddhistc *Nyāya* method in close association with Vedic exegesis and accounts for the earlier use of the term *Nyāya* in the sense of 'the principles and the logical method of Mīmāṁsā exegetics.' This also accounts for the fact that, even after the disentanglement of the Nyāya logic from Vedic exegetics, the legislators of ancient India like Manu and Yājñavalkya

emphatically recognised the importance and value of logical reasoning (*tarka*) in a correct comprehension of *dharma* as taught by the Vedas (*Manu* XII. 105 and 106; *Yājñavalkya* I. 3). Another section of rationalistic thinkers who did not agree to play second fiddle to scriptural authorities, perhaps developed and expounded rationalistic doctrines on independent lines, without subjecting themselves to the thraldom of Vedic religion and philosophy. Some of these doctrines perhaps shaped themselves into the Sāṁkhya thought of the pre-Buddhistic stage, with a marked degree of hostility to Vedic ritualism. Some other doctrines of this kind gave rise to the pre-Buddhistic logic and and metaphysics of the Vaiśeṣika, with a special leaning in favour of the inductive method of reasoning based on observation and analysis and with a simple rationalistic scheme of two sources of valid knowledge—perception and inference (*pratyakṣa* and *anumāna*). It is very likely that the anti-Vedic speculations of the pre-Buddhistic Sāṁkhya and the anti-Vedic logic and epistemology of the pre-Buddhistic Vaiśeṣika paved the way for the development and systematisation of Buddhism. It may here be borne in mind that Buddhistic tradition, as preserved in ancient Chinese records, readily recognises the priority of the Sāṁkhya and the Vaiśeṣika to Buddhism. (*See* Ui's *Vaiśeṣika Philosophy*, pages 3 and 4.)

About the fifth century B. C., when the anti-Vedic movements of Buddhism rose and began to spread, the exponents of Vedic philosophy and religion keenly felt the need for showing greater accommodation to

rationalistic modes of thought. The rationalistic resources available for Vedic religion and philosophy had to be pooled together and kept fit for defensive and offensive use, as against the impact from collision with *avaidika* developments. On the one side, it was found easy to disentangle from its Vedistic environment the logical method (*Nyāya*) of Vedic exegetics; and on the other side, to bring the unfettered methods of reasoning and analysis known to the early Vaiśeṣika under the influence of the attempts for *rapprochement* made by the Vaidika thinkers turned out to be an easy task, chiefly as a result of the disquieting nihilistic excesses of early Buddhism. Thus, the *Nyāya* of the Vedic exegesis and the logic and metaphysics of the early *anti-Vedic Vaiśeṣika* came to fraternise with each other and gave rise to two sister-schools of philosophical reasoning—the *Vaiśeṣika school* mainly concerned with inductive observation and analysis, and the *Nyāya school* chiefly concerned with the formulation and elucidation of the principles of ratiocination on the basis of inductive reasoning. These two schools should have appeared in a fairly definite form, with their characteristic methods of reasoning and metaphysics, by the middle of the fourth century B. C., though the chief doctrines of these schools came to be systematised and redacted in their basic sūtras at a relatively later date. This statement may receive good support from the following facts, if they could be taken to be conclusively established. Bhadrabāhu, a Jaina sage, whose activity as a Jaina logician may be assigned to about 357 B. C., was quite familiar with an old theory of ten-membered

syllogism. The Nyāya logic was known to Kātyāyana of the fourth century B. C., as Goldstucker has shown in his work on '*Pāṇini and his Place in Sanskrit Literature*'. Bādarāyaṇa's Vedānta-sūtras (II-ii 11 to 17) definitely presuppose the Vaiśeṣika. The *Lalitavistara* and *Milindapañha* mention the Vaiśeṣika. Even the Vaiśeṣika-sūtras, which were, in all probability, produced later than the middle of the fourth century B. C., do not controvert any of the Buddhistic doctrines, while Buddhistic tradition generally recognises the pre-Buddhistic origin of the Vaiśeṣika. These considerations, which tend to show that the Nyāya and Vaiśeṣika schools came into being in a definite form before the middle of the fourth century B. C., cannot be lightly brushed aside.

The doctrines of these two schools were systematised and redacted in the form of the Nyāya-sūtras and Vaiśeṣika-sūtras. The authorship of the former is ascribed to Gautama, and that of the latter to Kaṇāda. According to the generally accepted Indian tradition, which goes back to the early centuries of the Christian era, Gautama is otherwise known as Akṣapāda and Kaṇāda is otherwise known as Ulūka and Kāśyapa. It will be obvious to those who are familiar with the traditions of ancient India that *Akṣapāda* was the *personal* name and *Gautama* the *gotra* name of the author of the Nyāya-sūtras, and that *Kaṇāda* and *Ulūka* are the *personal* names and *Kāśyapa* the *gotra* name of the author of the Vaiśeṣika-sūtras, in the same way as *Pakṣilasvāmin* is the personal name and *Vātsyāyana* the *gotra* name of the author of the

Nyāyabhāṣya. Though the exact dates of Kaṇāda and Gautama are not known, the dates of their sūtras can be fixed within fairly definite limits. Jacobi, in his well-known article on the date of the philosophical sūtras (Journal of the American Oriental Society XXXI. 1911), endeavours to show that the Nyāya-sūtras and the Brahma-sūtras were redacted between 200 and 500 A.D., that the Vaiśeṣika-sūtras and Mīmāṁsā-sūtras were redacted at a somewhat earlier date, that the redaction of the Yoga-sūtras should be assigned to about 450 A. D., and that the sāṁkhya-sūtras were produced at a much later date, later than the fourteenth century. With regard to the Sāṁkhya-sūtras, it is generally accepted that they were composed later than the fourteenth century, though the *Tattva-samāsa*, which may be regarded as the nucleus of the basic sūtras of the Sāṁkhya system, is perhaps older than Īśvarakṛṣṇa and the Christian era and is certainly older than the *Bhagavadajjuka*, a farce earlier than the seventh century A. D. (*See* Journal of Oriental Research, Madras, Vol. II. pages 145 to 147). If the Bhikṣu-sūtra referred to in IV. iii.110 of Pāṇini's *Aṣṭādhyāyī* and the Brahma-sūtra mentioned in XIII.4 of the Gītā could be taken to refer to Bādarāyaṇa's Brahmasūtras, it would be difficult to accept, without due reservations, Jacobi's argument in its application to the Vedānta-sūtras. The name Patañjali, borne by the author of the Yoga-sūtras, presents some difficulties to Jacobi, as the date of Patañjali, the author of the Mahābhāṣya, is accepted to be the middle of the 2nd century B. C. But Jacobi would attempt to differentiate

the author of the Mahābhāṣya from the author of the Yoga-sūtras, though, as a matter of fact, the ancient tradition identifying the two Patañjalis is sound and maintainable on reasonable grounds. The central point of Jacobi's argument relates to the internal evidences furnished by the nature of the Buddhist doctrines controverted in some of these sūtras. The Nyāya-sūtras, according to Jacobi, refute the nihilistic *śūnya-vāda* of Nāgārjuna (3rd century A. D. circa) and do not refute the idealistic *vijñāna-vāda* of Asaṅga and Vasubandhu (middle of the 4th century A. D.). But, according to Vātsyāyana and Vācaspatimiśra, the Nyāya-sūtra IV. 2.26 refutes the *vijñāna-vāda*. It should also be remembered here that the *śūnya-vāda* and *vijñāna-vāda* doctrines were not introduced in the world for the first time by Nāgārjuna and Asaṅga and Vasubandhu and that, before these Buddhist teachers, these old doctrines had been in existence for a long time. Even if this line of argument adopted by Jacobi should be accepted as satisfactory, it does not touch the Vaiśeṣika-sūtras; and if the obverse of this argument were to be applied to these sūtras, the logical result would be that they should be held to be pre-Buddhistic. Kauṭalīya Artha-śāstra mentions the types of thought comprising *ānvīkṣikī* in the statement:—*Sāṁkhyam yogo lokāyatam cetyānvīkṣikī* (Vol. I. page 27, Trivandrum edition). Though the date of the Kauṭalīya is not yet finally settled, the general trend of well-informed and unprejudiced opinion among Indian and alien Indologists is in favour of assigning that great work to 304 B. C. In this extract from the Kauṭalīya, there is no

specific mention of Nyāya or Vaiśeṣika as such. Attention is drawn by Ui and Randle to noteworthy cases of parallelism between the Vaiśeṣika-sūtras and Nyāya-sūtras, in which it would be more reasonable to say that the former sūtras were used in the composition of the latter (*See* Ui's '*Vaiśeśika philosophy*', Introduction, page 16, note 1; and Randle's '*Indian Logic in the Early Schools*', Introduction, page 7, note 1). There is evidence to show that the sixth Jaina schism (18 A.D.) presupposes the Vaiśeṣika redaction (Ui's '*Vaiśeṣika philosophy*', Introduction, page 34). Chiefly, on these grounds, it is surmised by several scholars that the Vaiśeṣika-sūtras should have been redacted in the pre-Christian era, subsequent to 300 B. C.; and that the Nyāya-sūtras should have been redacted about the time of Nāgārjuna and Deva, between 150 and 250 A. D. may be inferred from the fact that the sūtras 2.2.17—19 seem to presuppose the refutatory comments in Nāgārjuna's *Vigrahavyāvartanī* on the realistic position regarding the relation between *pramāṇa* and *prameya* (Ui's *Vaiśeṣika Philosophy*, Introduction pages 84 to 86). Randle concludes that the "Vaiśeṣika and Nyāya were systematised between 200 B. C. and 200 A. D., the Vaiśeṣika being the earlier of the two"; and that "the indications, such as they are, point to the beginning of the first century A. D., as the latest date for the systematisation of the Vaiśeṣika". (Randle's '*Indian Logic in the Early Schools*', Introduction, pages 16 and 17.)

These conclusions, based as they are on good grounds as far as they go, would appear to require

reconsideration on a careful scrutiny of all the evidences available. That the redaction of the Nyāya-sūtras presupposes that of the Vaiśeṣika-sutras may be readily admitted. It is not easy to establish that the Vaiśeṣika-sūtras were redacted subsequent to 300 B. C., on the ground that the name Vaiśeṣika is not contained in the extract from the Kauṭalīya quoted above. Those who are sufficiently familiar with the use of the word *yoga* in its old sense of *vaiśeṣīka*, as it is found used, for instance, in Vātsyāyana's bhāṣya on 1.1.29, are not likely to consider it a strained interpretation to take the word *yoga*, as used in the Kauṭalīya, in the sense of *vaiśeṣika*. In fact, according to Vācaspatimiśra's *Tātparyaṭīkā* and the *Bhāṣyacandra* on the bhāṣya on 1.1.29, the word *yoga* may be taken in the somewhat comprehensive sense of Nyāya, including the Vaiśeṣika, the Nyāya being a philosophical school laying special stress upon *yoga* or *yukti* or reasoning (*yogo yuktiḥ pradhānatayā vidyate yeṣām* —*Bhāṣyacandra*). Further, in the extract quoted above from the Kauṭalīya, scholars have generally overlooked one important point, to which sufficient prominence ought to be given in this connection. In chapter 2, the Vidyāsamuddeśa section of the Kauṭalīya, the chief branches of knowledge (*vidyā*), according to Kauṭalya, are stated at the outset. These are four:—*ānvīkṣikī* (logic and philosophy), *trayī* (the Vedic religion and philosophy of *dharma* and *adharma*), *vārtā* (the economic science and philosophy of wealth) aud *daṇḍanīti* (the science and philosophy of polity). Then there is a reference to the view of

the *Mānavas* (Manu's disciples or ancient legislators), according to which *ānvīkṣikī* should be regarded as a special part of *trayī*. This view, it may be noted, is consistent with the spirit of the Vedic and Upaniṣadic age, when *logic* (Nyāya) had not yet been disentangled from its applications to Vedic religion and philosophy. There is also a further reference to the materialistic doctrine of the Cārvākas (the followers of Bṛhaspati), that *trayī* (including *ānvīkṣikī*) is only a pretension or imposture of one who knows the ways of the world and that only *vārtā* and *daṇḍanīti* should be reckoned with as the two real *vidyās*. The followers of Uśanas (the teacher of the Asuras) are afterwards referred to as recognising only one *vidyā*—viz., the *daṇḍanīti*. At the end of this chapter, Kauṭalya reiterates his views about the four branches of learning and explains their nature and aim. In the concluding para of this chapter, he makes two important observations. One is to the effect that *ānvikṣīkī* consists of Sāṁkhya, Yoga and Lokāyata. The other is that *ānvīkṣikī* is helpful to the world through its ratiocinative process in the investigation of the soundness or unsoundness of the conclusions and doctrines of the different branches of knowledge.

Sāṁkhyam yogo lokāyatam cetyānvīkṣikī. Dharmādharmau trayyām. Arthānarthau vārtāyām. Balābale caitāsām hetubhiranvīkṣamāṇā ānvīkṣikī lokasyopakaroti; vyasane abhyudaye ca buddhimavasthāpayati; prajñāvākyakriyāvaiśāradyaṁ ca karoti.

Pradīpaḥ sarvavidyānām upāyaḥ sarvakarmaṇām|
Āśrayaḥ sarvadharmāṇām śaśvadānvīkṣikī matā||

(Pages 27 and 28 of Vol. I of the Kauṭalīya, Trivandrum edition.)

It is evident here that Kauṭaliya elucidates the two meanings of the term *ānvīkṣikī*. One is the general sense, *philosophical enquiry* or *philosophy*. In this sense, it is used in the first sentence of the above extract. As already pointed out, the word *yogaḥ* in this sentence refers to the Vaiśeṣika logic; or even if it be taken in the special sense of the *yoga* discipline of Patañjali's system, the word *lokāyata* does not refer to the materialism of the Cārvākas, but very probably it refers to the logic of the Vaiśeṣika and Nyāya in its secularised form and as disentangled from its Vedic associations. It should be noted here that the view of the Cārvāka materialist is separately mentioned in a previous part of the same chapter and Kauṭalya rejects it and is not prepared to bring the Cārvāka doctrine under any recognised *vidyā* or branch of learning. Vātsyāyana, in the concluding part of his bhāṣya on 1.I-1, amplifies the second sense of the word *ānvīkṣikī*, *i.e.*—'logic which investigates by means of rationalistic methods' (*hetubhiranvīkṣamāṇā*) and gives Kauṭalya's verse quoted above, with its last quarter modified as "*vidyoddeśe prakīrtitā*". It is quite clear from this amended quarter of the verse, as given by Vātsyāyana, that he is quoting from the *Vidyāsamuddeśa* section of the Kauṭalīya. It is hardly necessary to point out that a careful consideration of the above extract from the

Kauṭalīya in comparison with its striking parallel in Vātsyāyana's bhāṣya on 1.1.1 would make it very difficult to believe that *ānvīkṣikī*, in the sense of 'system of logic', was not presupposed by the *Arthaśāstra* of Kauṭalya. Further, a careful consideration of the extract from Nāgārjuna's *Vigrahavyāvartanī*, which Ui gives in pages 84 and 85 of his introduction to the '*Vaiśeṣika philosophy*', in comparison with its parallel in the Nyāya-sūtras 2.2.17—19, would tend to show that Nāgārjuna is presupposing these sūtras and refuting the view embodied in them, rather than support Ui's inference in the reverse direction. Patañjali, at the end of his *bhāṣya* on Pāṇini's 3.2.123, remarks—"Other thinkers hold that there is nothing known as the *present time*" (*Apara āha—nāsti vartamānaḥ kāla iti*) and gives five verses in support of this view. This portion of the Mahābhāṣya closes with the remark "Another thinker holds that there is such a thing as the *present time*, and it is not perceived in the same way as the Sun's motion is not perceived" (*Apara āha —asti vartamānaḥ kālaḥ*) and supports this view with one verse. Between this portion of the Mahābhāṣya and the Nyāya-sūtras 2.1.40—44, there is a striking parallelism, which none can miss. A careful consideration of these two texts would lead to the impression that Patañjali is here using not only the ideas in the Nyāya-sūtras referred to, but also the phraseology in those sūtras, in his characteristically graphic narration of of a discourse between two imaginary dialogists. All these considerations may reasonably lead to the conclusion that the Vaiśeṣika-sūtras and the Nyāya-

sūtras were redacted between the middle of the fourth century and second century B. C., perhaps towards the end of the fourth century B. C., the Vaiśesika-sūtras being earlier than the Nyāya-sūtras.

SECTION IV

THE NAMES VAISESIKA AND NYAYA; THE NATURE, AIM AND SCOPE OF THE TWO SYSTEMS

It is generally accepted that the names *Vaiśeṣika-darśana* and *Nyāya-darśana* are based upon the terms—*viśeṣa* and *nyāya*. It is not possible now to ascertain exactly what these two terms signified to the early exponents of these two systems, who were responsible for devising and introducing these two names. According to an old tradition recorded by the Chinese Buddhists—*Ci-tsān* (549-623 A.D.) and *Kwhēi-ci* (632-682 A. D.), Kaṇāda's work came to be called the *Vaiśeśika-śāstra,* since it excelled works of the other systems, more especially the Sāṁkhya and it was differentiated from them, the term *vaiśeṣika* being taken in the sense of 'superior to' or 'distinct from'. (*See* Ui's *Vaiśeṣika Philosophy*—pp. 3 to 7). Indian tradition is in favour of connecting the name *Vaiśeṣika* with the doctrine of *specialities* (*viśeṣāḥ*), *viśeṣa* being regarded as the distinctive category of the *Vaiśeṣika* scheme of categories. The Vaiśeṣika-sūtra—1.1.4—which practically represents the beginning of Kaṇāda's sūtras, lays special emphasis, not upon any of the categories, but upon 'the comprehension of truth through similarities and dissimilarities' (*sādharmyavaidharmyābhyām*

tattvajñānam)—upon the striking out of the *one* in the *many*; and this amounts to an unmistakable stress on 'the *analytic* or *inductive* method of philosophical reasoning'. Gautama's *Nyāya-darśana* took its name from *nyāya*, which means 'the *synthetic* or *deductive* method of syllogistic demonstration'. Gautama's system lays particular stress on the synthetic method of syllogistic reasoning. One of the earlier meanings of the term *nyāya* is 'exegetic principle or maxim'; and after logical reasoning had been released from *Vedic exegesis*, the term *nyāya* developed the specialised sense of syllogistic reasoning. The appropriateness of using the term *nyāya*, in this specialised sense, as the name of Gautama's system lies not only in the historical connection between the Nyāya and Mīmāṁsā systems; but it lies also in the fact that the term *nyāya* means *illustration* or *example* and that example (*udāharaṇa*) is the most important of the five members constituting Gautama's syllogistic expression. Thus it may be seen that the names *vaiśeṣika* and *nyāya* may be connected with the two aspects of sound reasoning—the *analytic* or *inductive* aspect which mounts up from particulars (*viśeṣa*) to the general or universal (*sāmānya*) and the *synthetic* or *deductive* aspect which moves on from the universal (*sāmānya*) to the particulars (*viśeṣa*). In these logical notions, it would be in keeping with the history of Indian philosophical thought to recognise the basis of the names, *vaiśeṣika* and *nyāya*, rather than in the ontological doctrines of *atomism* and *pluralistic realism*. This would account better for the way in which the interrelation of the

Vaiśeṣika and the Nyāya came to be conceived of as two sister systems in spite of their differences on the metaphysical side.

The Vaiśeṣika and the Nyāya, in their early and later phases, are not restricted in their scope and aim to logic in a narrow sense. Like other Indian systems, these two form self-contained philosophical disciplines of a complex character, with a distinctive central theme correlated to their special goal. The final cessation of all miseries (*apavarga*) is the goal of the Vaiśeṣika and the Nyāya. The Vaiśeṣika stresses the analytical side of reasoning and furnishes the metaphysical background and the inductive basis of the Nyāya system. With the Vaiśeṣika material, suitably modified in minor details, the Nyāya builds up a complete system of epistemology and logic, combined to some extent with psychology, ethics, ontology and religion. Such a mixed composition of Indian philosophical systems is due not to any lack of appreciation of differences of value in different things, but rather to the cultural outlook of India, which is dominated by an intense desire to synthesise all the departments of knowledge in a scheme of progressive realisation of life's ends culminating in final emancipation (*mukti*) conceived of as the *summum bonum*. Methodical reasoning, involving a critical investigation of knowledge got through perceptual experience and verbal testimony, *i.e.*, *anvīkṣā*, with the help of the five-membered scheme of syllogistic expression (*nyāya* or *pañcāvayavavākya*), forms the distinctive contribution of the Nyāya to phi

losophical thought. Since its first redaction, the Nyāya system has permanently secured for itself a position of importance in the Hindu scheme of Vedic religion and philosophy, chiefly by the ancillary role which it has assumed in its relation to the Veda; and if the Vaiśeṣika also is given a place among the *āstıka* systems, it is due mainly to its fraternity with the Nyāya. Gokulanātha, a Naiyāyika of the 16th century A.D., suggests in his philosophical drama, called *Amṛtodaya*, that *Ānvīkṣikī* is the amazonian commander-in-chief of *Śruti*—the empress ruling over the empire of knowledge and emancipation. This poetic representation would be very helpful in appreciating the exact position of the *Nyāya-vaiśeṣika* system in the scheme of *āstika* schools of philosophy.

SECTION V

SYNCRETISM AND SYNTHESIS

It has now become usual among modern scholars, when speaking about the historical development of the Vaiśeṣka and Nyāya systems, to refer to the tendency to *syncretism* in these two schools. In chapter II, part I of "*Indian Logic and Atomism*", Dr. Keith dwells upon what he describes as "the syncretism of the schools" and the "syncretist school". Syncretism, in its strict sense, means the tendency to reconcile and blend two opposing and irreconcilable systems, by minimising differences. In this sense, it would be

correct to speak about syncretism in the *Vaiśeṣika* and Nyāya only with reference to their condition before their redaction into sūtras, and even then, with due reservations. It may be said that, in the pre-Buddhistic age, rationalistic thinking came to have a schismatic split which resulted in two opposing types of rationalistic thought, one linking itself with Vedic tradition and the other antagonising it. As already pointed out at page xi-*supra*, a *rapprochement* was effected between these two types of thought; and as a result of this, the Vaiśeśika and Nyāya arose in the form of two sister schools. The tendency which led to the first redaction of these two schools in a fraternal relation may be appropriately described as *syncretism*. Since their definite emergence as two distinct and allied systems about the fourth century B. C. to this day, the Vaiśeṣika and Nyāya have been treated as sister schools, fundamentally agreeing with each other in respect of important metaphysical and logical doctrines and persistently showing some comparatively minor differences; and in this condition, they were never regarded as opposing schools and it would not be quite accurate to speak of syncretism in them, in the strict sense of the term. In the somewhat larger sense, however, of synthesis, one may well speak of *syncretism* in these two sister schools from and after their first redaction. In the history of the Nyāya-Vaiśeṣika system, the Vaiśeṣika and Nyāya schools were never regarded as rival sehools. Nor were their differences ever forgotten: and till recently, separate Nyāya and Vaiśeṣika treatises continued to be written.

In fact, even as late as in the seventeenth century A. D., separate handbooks dealing with the Vaiśeṣika doctrines, like Gaṅgādharasūri's *Kāṇādasiddhānta-candrikā* (Trivandrum Sanskrit Series No. XXV), were written. It should be remembered here that Akṣapāda-Gautama, effected the momentous synthesis between the *inductive* (*Vaiśeṣika*) and *deductive* (*Nyāya*) types of rationalistic thinking, in his doctrine of five-membered syllogistic expression (*nyāyaprayoga*) hinging upon the *example* (*udāharaṇa*) as the central member. The Nyāya ontology is built upon the atomic theory and pluralistic realism of the Vaiśeṣka. The Nyāya epistemology, with its fourfold scheme of *pramāṇas* is distinctly *pro-Vedic*; and in this respect, it shows a sharp contrast with the Vaiśeṣika scheme of *pramāṇas* which consists of perception and inference and which betrays *anti-Vedic* leanings. Such points of contrast have only led to Vaiśeṣika gradually losing its hold and influence. Indian philosophical tradition recognises three important pairs of allied systems (*samānatantrāṇi*)—viz., the *Sāṁkhya* and *Yoga*, the *Vaiśeṣika* and *Nyāya*, and the *Mīmāṁsā* and *Vedānta*. Vātsyāyana, in his bhāṣya on the Nyāya-sūtra (1.1.22), speaks of the *Vaiśeṣika* and the *Nyāya* as *samānatantra*. It is noteworthy that, while the *Sāṁkhya* and *Yoga*, and the *Mīmāṁsā* and *Vedānta* grew as two pairs of allied systems, the *Vaiśeṣika* and *Nyāya* came to be more closely knit together and grew as *twin* systems, chiefly as a result of the complete *synthesis* which the Nyāya effected in its logical method.

SECTION VI

AFTER THE SUTRAS TO UDAYANA

The extant early works, forming the basic source-books of the Vaiśeṣika system, are Kaṇāda's sūtras and Praśastapāda's *Padārthadharmasaṁgraha*, better known under the name of *Praśastapādabhāṣya*. Accord-to Udayanācārya's *Kiraṇāvalī*, as interpreted by Padmanābhamiśra in his *Kiraṇāvalībhāskara* (Benares Sanskrit Series, *Kiraṇāvalī*, page 5), Praśastapāda's *Padārthadharmasaṁgraha* is a comprehensive epitome of the Vaiśeṣika system which presupposes an extensive Vaiśeṣika-bhāṣya, known as *Rāvaṇa-bhāṣya* and attributed to an ancient philosopher called Rāvaṇa. At page 278 of the manuscript of the commentary called the *Prakaṭārthavivaraṇa* on Śaṁkara's *Brahmasūtra-bhāṣya*, preserved in the Government Oriental Manuscripts Library, Madras, Rāvaṇa's *bhāṣya* on the Vaiśeṣika-sūtras is cited. (See p. 491 of Pt. of the edition of this work in the Madras University Sanskrit Series). *Prakaṭārthavivaraṇa* is earlier than 13th century A. D. An interesting confirmation of the tradition about *Rāvaṇa-bhāṣya* is contained in the *viṣkambha* to the fifth Act of the *Anargharāghava* (Nirnayasagara edition, page 161). There is evidence to show that this drama must be earlier than the latter part of the ninth century A. D. In this connection, attention is invited to my paper on the *Rāvaṇa-bhāṣya*, which appears in volume III of the Journal of Oriental Research, Madras, pages 1 to 5. In this paper, it is indicated that it may not be unreasonable to conjecture

that the *Rāvaṇa-bhāṣya* was perhaps dominated by atheistic and pro-Buddhistic proclivities, such as were quite in keeping with the text of the Vaiśeṣika-sūtras and with the spirit of the tradition characterising the *Vaiśēṣikas* as *ardhavaināśikas* (semi-nihilists), while the work of Praśastapāda gave a theistic turn to the Vaiśeṣika system and presented its doctrines in an anti-Buddhistic *āstika* setting. There is conclusive proof to show that Praśastapāda should be earlier than Uddyotakara, the author of the *Nyāyavārtika*, who flourished in the latter part of the sixth or the beginning of the seventh century A. D. Professor Ui, in his introduction to the '*Vaiśeṣika Philosophy*', draws attention to the evidences showing that Praśastapāda should be earlier than Paramārtha and Dharmapāla. Though Keith emphatically asserts in his '*Indian Logic and Atomism*' that Praśastapāda's indebtedness to Dignāga is undoubted, it must be said that Praśastapāda's debt to Dignāga has not yet been proved. If, on the other hand, Praśastapāda could be taken to be presupposed by Vātsyāyana on the ground relied upon by Mr. Bodas in his introduction to the *Tarkasaṁgraha* (Bombay Sanskrit series, No. LV.), Dignāga, who presupposes Vātsyāyana, must be later than Praśastapāda. The two most authoritative commentaries on Praśastapāda's Bhāṣya are Śrīdhara's *Kandalī* and Udayanācārya's *Kiraṇāvalī*. Śrīdhara's date is given as 991 A. D. in his *Kandalī* and Udayana's date is given as 984 A. D. in one of his works—*Lakṣaṇāvalī*. Śrīdhara's reputation is restricted to his Vaiśeṣika work ;

but Udayana holds a far higher place in Indian philosophy and he is held in high esteem as the Nyāyācārya *par excellence.*

The extant basic works of Nyāya are Gautama's Nyāya-sūtras, the Nyāya-bhāṣya by Vātsyāyana, otherwise known as Pakṣilasvāmin, and the Nyāya-vārtika by Uddyotakara. In the Nyāya-vārtika and other works, there is sufficient evidence to show conclusively that Dignāga, the famous Buddhistic logician, adversely criticised the Nyāya-bhāṣya. Vasubandhu, the famous teacher of Dignāga, criticised Nyāya-sūtras and the Nyāya-bhāṣya does not reply to Vasubandhu's criticisms. From these facts, it would be reasonable to conclude that the Nyāya-bhāṣya is earlier than about the middle of the fourth century A. D., which is the date for Vasubandhu. Vātsyāyana suggests alternative interpretations to some of the sūtras, as, for instance, in his Bhāṣya on 1.1.5. This may lead to the inference that Vatsyāyana wrote his Bhāṣya, long after the Sūtrakāra, perhaps at a time when the meaning of some of the sūtras had already become a matter for speculation. There has been some controversy among scholars as to whether there was any commentary on the Nyāya-sūtras before Vātsyāyana, and whether the aphoristic statements, which the Bhāṣyakāra introduces in the course of his exposition, are really quotations from some earlier commentary on the sūtras. Professor Windisch and several others are inclined to think that such aphoristic statements are citations from an earlier commentary. Professor Randle discusses this question in his recent work *"Indian Logic in the Early Schools"*

(pages 19 to 24) and concludes that these aphoristic statements are not citations from any author but should be viewed as forming "the heritage of the school and as carrying an authority only less than that of the sūtras themselves". Indian tradition, however, is wholly against any speculation of this kind in regard to to the aphoristic statements in the Bhāṣya above referred to. In Śāstra literature, more especially in old works like the Bhāṣyas on the various systems, it is a common stylistic device to put forward a main thesis or argument in the form of a terse aphoristic statement and amplify it in an expository note. Several old Bhāṣyakāras have adopted this device and hundreds of instances can be given from the *Mahābhāṣya* of Patañjali and Śaṅkara's Bhāṣyas on the Bṛhadāraṇyakopaniṣad and the Brahma-sūtras. In fact, the aphoristic statements which Vātsyāyana makes at the beginning of his expository sections form integral parts of Vātsyāyana's own composition; and it would be as absurd to ascribe such statements to any author different from Vātsyāyana, as it would be to ascribe the aphoristic statement, "Since there is no difference from cattle and other lower animals" in Śaṅkara's Bhāṣya on the Brahma-sūtras (*paśvādibhiścāviśeṣāt*-1.1.1) to some author different from the Bhāṣyakāra, who amplified that statement in the following expository paragraph beginning with the words "*yathā hi paśvādayaḥ*". Students of Indian logic will do well to remember that Vātsyāyana is the earliest known writer who drew pointed attention to the reason why Gautama's Nyāya came to be regarded as *the science of epistemology*

and logic (*Pramāṇaśāstra, Ānvīkṣikī* or *Nyāya-śāstra*). It is worth remembering, in this connection, that Vātsyāyana indicates in the very first sentence of his Bhāṣya how valid thinking (*pramā*) and fruitful doing (*arthakriyā*) serve as each other's axle in each other's wheelings and how they constitute *real living* with all its complexity in the pluralistic universe of the Nyāya-Vaiśeṣika realism. It is also worth noting that it is Vātsyāyana who first explained how the entire epistemological scheme of Pramāṇas could be synthesised in a valid syllogistic expression, (*vide* pages 30 to 42 of his Bhāṣya on 1.1.1, Chaukhamba edition) and how, for this reason, logic proper justly came to exercise a profound influence over the whole realm of philosophical thought in India.

About the end of the sixth century A.D., or in the former half of the seventh century, Uddyotakara wrote his *Nyāya-vārtika*, the earliest extant commentary on the *Nyāya-bhāṣya*. Some scholars like Dr. Keith maintain that Uddyotakara was a contemporary of the Buddhistic logician Dharmakīrti. Hiuen-tsang (629-645 A. D.) does not speak of Dharmakīrti, while I-tsing (671-695 A. D.) refers to him. The reference in the *Nyāya-vārtika* to a *Vāda-vidhi* (page 117, line 21, Chaukhamba edition) is the only argument relied upon for showing that Uddyotakara is not earlier than Dharmakīrti. This argument assumes that Dharmakīrti is the author of the *Vāda-vidhi*. Sufficient evidence has not been adduced in support of the view that the *Vāda-vidhi* is one of Dharmakīrti's works. Chinese tradition definitely lends support to the identification of the

Vāda-vidhi with one of Vasubandhu's works. Further, in the Vārtika on 1.1.4, Dignāga's definition of perception is criticised; and it is generally accepted by Brahmanical and Buddhistic authorities alike that Dharmakīrti was responsible for the introduction of the additional word *abhrānta* in that definition, chiefly with a view to meeting the objections raised by Uddyotakara against it. These considerations tend to show that it would be reasonable to assign Uddyotakara to the end of the sixth or the beginning of the seventh century A. D. and to assign Dharmakīrti to about the third quarter of the seventh century A. D. Uddyotakara's great service to Nyāya consists in his successful endeavour to lift it up from the slough into which it was thrown by Dignāga's confutation of Vātsyāyana's Bhāṣya. After Uddyotakara, the philosophical contest between the anti-Vedic and pro-Vedic sides of the Nyāya thought was keenly carried on by great Buddhistic logicians like Dharmakīrti, Dharmottara and Ratnakīrti and eminent Brahmanical logicians like Vāćaspatimiśra, Jayantabhaṭṭa, Bhāsarvajña and Udayana. Vācaspati has himself given 841 A. D. as the date of the composition of his index to Gautama's sūtras, called *Nyāya-sūcī-nibandha.* Vācaspati is famous for his polymathic learning and dispassionate philosophical outlook. He is the author of many important and authoritative treatises, mainly in the nature of expository and critical commentaries, on almost all the systems of Indian philosophy. His *Brahmatattva-samīkṣā* on Maṇḍanamiśra's *Brahmasiddhi* and *Bhāmatī* on Śaṅkara's Brahmasūtra-bhāṣya represent

the Advaita system; his *Sāṁkhya-tattvakaumudī* and *Yoga-bhāṣya-vaiśāradī* represent the Sāṁkhya-Yoga system; and his *Nyāya-sūcī-nibandha* and *Nyāya-vārtika-tātparya-ṭīkā* represent the Nyāya system. There is evidence to show that *Bhāmatī* should have been his latest work. In his *Nyāya-vārtika-tātparya-ṭīkā*, he renders intelligible the difficult portions of the Nyāya-vārtika and incidentally discusses several obscure portions of the Nyāya-bhāṣya and the Nyāya-sūtras, in accordance with the Nyāya tradition handed down to him by his Nyāya teacher—Trilocana. For the monumental contribution which he made to Nyāya in his *Tātparya-ṭīkā*, he came to be known as the Tātparyācārya in Nyāya literature. He justly claims, in his *Tātparya-ṭīkā*, special credit for having redeemed from oblivion Uddyotakara's work, which came to be regarded very old and nearly forgotten in the ninth century A. D. Jayantabhaṭṭa, who presupposes Vācaspati in his work and refers to Ānandavardhana's *Dhvanyāloka* (*Vide* page 48 lines 21 to 25, Nyāyamañjarī, Benares), should be taken to be later than the middle of the ninth century A.D.; and with the help of the particulars furnished by Jayanta's son, Abhinanda, in the *Kādambarīkathāsāra*, Jayanta may be assigned to the third quarter of the ninth century A. D. Jayanta's chief contribution to Nyāya is his *Nyāyamañjarī*. This work is of the nature of an elaborate *vṛtti* (expository gloss) on select sūtras of Gautama. Jayanta himself says that the *Nyāya-mañjarī* was so well appreciated by his contemporaries that he came to be recognised as the Vṛtti-kāra of Nyāya.

Bhāsarvajña, who flourished perhaps about the beginning of the tenth century A.D., is the author of an important Nyāya work called *Nyāya-sāra*; and the distinctive feature of this work is its epistemology which deviates in certain respects from established Nyāya tradition, as for instance, in discarding *upamāna* as a distinct Pramāṇa and in recognising six *hetvābhāsas* including *anadhyavasita*. Udyanācārya is the greatest Naiyāyika of the tenth century A.D. At the end of one of his works, *Lakṣaṇāvalī*, he has given 984 A.D. as the date of its composition. Besides his erudite commentaries on Praśastapāda's Bhāṣya and Vācaspati's *Tātparya-ṭīkā*—*Kiraṇāvalī* and *Tātparya-pariśuddhi*, he wrote three important Nyāya works—the *Prabodhasiddhi*, otherwise called *Nyāyapariśiṣṭa*, the *Ātma-tattva-viveka*, otherwise called *Bauddha-dhikkāra* and the *Nyāya-kusumāñjali*. The first of these three works contains an elucidative and illustrative exposition of the subtleties of *jāti* (futile respondence) and *nigrahasthāna* (vulnerable points) in accordance with the dialectics of early Nyāya. The *Ātma-tattva-viveka* is a brilliant exposition of the Nyāya metaphysics with particular reference to the Nyāya conception of the *self* (*jīva*) and contains a forcible refutation of the Buddhistic doctrines of momentariness (*kṣaṇa-bhaṅga*) and voidness (*śūnya*). The *Kusumāñjali* is Udayana's masterpiece. It is devoted to a refutation of the anti-theistic theories maintained by the Vedistic, Sāṁkhya, nihilistic and naturalistic schools of his age and to the amplification and vindication of the Nyāya theism, chiefly on the

basis of the creationistic view of causation. Udayana's theistic argument consists of two main parts:—one part arguing *towards* values, design and causation in the sense of creation and the other part arguing *to* God *from* values, design and creation. His monumental contribution to Indian theism has secured for him the high rank of *Nyāyācārya*. From the references given on page 21 of the Sanskrit introduction to the *Kandalī* (Vizianagaram Sanskrit Series), it may be safely concluded that Udayana was a contemporary of Śrīdhara.

SECTION VII

AFTER UDAYANA TO ANNAMBHATTA

Śivādityamiśra's *Saptapadārthī* is a short and simple manual setting forth the essentials of the Vaiśeṣika system chiefly in accordance with Praśastapāda's Bhāṣya. It also makes use of the Nyāya material in Bhāsarvajña's *Nyāya-sāra*, to some extent. Śivāditya's text giving his scheme of six fallacious types of *probans* with *anadhyavasita* corresponding to *asādhāraṇa* (uncommon *probans*) as a distinct type, is practically a reproduction of the corresponding text of Bhāsarvajña. (*Compare* page 23, *Saptapadārthī*—Vizianagaram Sanskrit Series, with page 25 in the *Nyāyasāra*—Poona Oriental Book Agency). A careful comparison of Śivāditya's *Saptapadārthī* with Udayana's *Kiraṇāvalī* would lead one to believe that the *Saptapadārthī* utilised the material in the *Kiraṇāvalī*. For instance, the definition of darkness on page 71 of *Saptapadārthī* appears to presuppose

Udayana's remarks about darkness on pages 111 and 112 of the *Kiraṇāvalī* (Bibliotheca Indica); the definition of *jāti* on page 70 of the *Saptapadārthī* appears to presuppose Udayana's enumeration of *jātibādhakas* on page 161 of the *Kiraṇāvalī* and the definition of *lakṣaṇa* (definition) found on page 192 of the *Kiraṇāvalī* is reproduced on page 35 of the *Saptapadārthī*. Śrīharṣa, the author of the *Khaṇḍanakhaṇḍakhādya*, and Gaṅgeśa, the author of the *Tattvacintāmaṇi*, undoubtedly refer to Śivāditya. (*Vide* introduction to the *Saptapadārthī*—page 2.) On these grounds, it would not be unreasonable to assign the *Saptapadārthī* to the eleventh century A. D. (circa). The importance of the *Saptapadārthī* lies in the fact that later writers like Annambhaṭṭa used it as their model for their primers of Nyāya, as may be unmistakably made out from the close correspondence between several portions in the *Saptapadārthī* and primers like the *Tarkasaṁgraha*.

The greatest Nyāya work, which was written after Udayana, is the *Tattvacintāmaṇi* by Gaṅgeśopādhyāya. In this monumental work, Gaṅgeśa utilised all the constructive, expositary, critical and polemical material in the earlier works on Nyāya and Vaiśeṣika and gave the final shape and turn to the logic and metaphysics of Nyāya. In treating the various topics of Nyāya, the earlier writers usually adopted the *categoristic* method, which was inaugurated by Gautama. This method as expounded by Vātsyāyana, consists in enumeration and classification (*uddeśa* and *vibhāga*), definition (*lakṣaṇa*), careful investigation and discussion (*parīkṣā*). Varada-

rāja's *Tārkikarakṣā* (1100 A. D. circa) is the latest important work on Nyāya, which adopts the old *categoristic* method in accordance with the Nyāya-sūtras and Bhāṣya. It was Gaṅgeśa who replaced this old method by what may be described as the *epistemological method* or the *pramāṇa* method, which definitely shifted the emphasis from the categoristic treatment of the topics (*padārthāḥ*) of Nyāya to the epistemological treatment of the four means of valid cognition (*pramāṇāni*) recognised by the Naiyāyikas. Thus, the Nyāya-śāstra which had remained hitherto a mere *padārtha-śāstra*, for all practical purposes, was turned into a full-fledged *pramāṇa-śāstra* in Gaṅgeśa's *Tattvacintāmaṇi*; and in this partly lies the epoch-making character of this monumental work on Nyāya. That the *Tattvacintāmaṇi* serves as the basic work on which the whole literature of what is commonly known as *navya-nyāya* (modern Nyāya) rests is also another reason for regarding it as an epoch-making work. The *Tattvacintāmaṇi*, or the *Maṇi* as it is popularly known, consists of four main divisions represented by the four chapters (*khaṇḍa*) on perception (*pratyakṣa*), inference (*anumāna*), assimilation in the sense of analogising (*upamāna*), and verbal testimony (*śabda*). In the course of an elaborate elucidation and discussion of the nature and objective reach and content of these four Pramāṇas, the relevant topics of the Nyāya-Vaiśeṣika system are considered in the *Maṇi* in comparison with the kindred topics of other philosophical systems. The language of Gaṅgeśa's *Maṇi* is also of an epoch-making type. Such of the modern students of Nyāya literature as are

not equipped with the required control over the terminology of *navya-nyāya* are apt to indulge in the ill-conceived criticism that the language of the *Maṇi* and the connected works is spoiled by a huge over-growth of inflated and hair-splitting logic-chopping. The key to *navya-nyāya* is its terminology. Those who have controlled this terminology are sure to find in the *Maṇi* and allied works a discipline of unique subtlety and value. The history of philosophical thought shows that lack of precision in expression seriously hampers its progress. In Indian thought, this defect was sought to be remedied by Naiyāyikas like Gaṅgeśopādhyāya through several thought-measuring devices, which chiefly consisted of formulas in Sanskrit constructed with the aid of terms like *avacchedaka* (the delimitor), *avacchedya* (the delimited), *nirūpaka* (co-forming), *nirūpya* (co-formed), *anuyogin* (containing correlate) and *pratiyogin* (the other correlate or counter-correlate). All the Indian dialecticians, who wrote after Gaṅgeśopādhyāya, were influenced by the thought-measuring formulas used by Gaṅgeśa. By using such formulas, it was possible for later dialectics in Indian philosophical literature to achieve a remarkable degree of quantitative precision in measuring the *extent* (temporal and spatial), *content* and *intent* (purpose and potency) of cognition (*jñāna*).

Gaṅ geśa quotes Śrīharṣa (the *Khaṇḍanakāra*) and refutes his view (page 233 of the *Maṇi—anumāna*, Bibliotheca Indica). There is sufficient evidence in favour of assigning Śrīharṣa to 1136 A. D. circa. Pakṣadharamiśra, otherwise known as Jayadeva, wrote

a commentary called *Āloka* on the *Maṇi*. This Jayadeva is believed to be identical with Jayadeva, the author of the *Prasannarāghava*. A verse from this drama (*kadalī kadalī* etc., I. 37) is quoted in the *Sāhityadarpaṇa*, as pointed out by Mr. P. V. Kane in his introduction to the latter work. Thus Pakṣadharamiśra, *alias* Jayadeva, must have been considerably earlier than the *Sāhityadarpaṇa* (1300 A. D. circa). These facts will show that it would not be reasonable to assign Gaṅgeśa to any date much earlier than 1200 A. D. and that he may be assigned to the former half of the thirteenth century A.D.

Vardhamānopādhyāya, the only son of Gaṅgeśa according to tradition, was also a reputed Naiyāyika of this period. He wrote several learned and illuminating works, generally known as *Prakāśa*, in the form of commentaries on Udayana's treatises, Gaṅgeśa's *Maṇi* and Vallabhācārya's *Nyāyalīlāvatī*. Jayadeva's pupil, Rucidatta, was a logician of considerable repute and was the author of a well-known commentary called *Makaranda* on Vardhamāna's *Prakāśa*.

The end of the fifteenth century, as also the sixteenth and seventeenth centuries, may well be described as marking the heyday of Nyāya dialectics in Nuddea (Navadvīpa, Bengal). Vāsudeva Sārvabhauma was the greatest Naiyāyika who flourished about the end of the 15th and the earlier part of the 16th century. He had the unique privilege and glory of having taught Nyāya to four of the greatest personalities of the 16th century: *viz.*—Caitanya, the greatest Vaiṣṇava teacher

and reformer of Bengal in the 16th century; Raghunātha, otherwise known as *Tārkika-śiromaṇi* (the crest-jewel of all logicians); Raghunandana, a famous Bengal lawyer; and Kṛṣṇānanda, a reputed *tāntrika*, who was a great authority on the different forms and charms of the Śākta cult. Raghunātha (*Tārkika-śiromaṇi*) was admittedly the greatest logician of the sixteenth century. He wrote several treatises on Nyāya, mostly in the form of commentaries and the greatest and the most famous of the works is the *Dīdhiti*, an expository and critical commentary on Gaṅgeśa's *Maṇi*. Mathurānātha was the most famous of Raghunātha-śiromaṇi's pupils and wrote authoritative commentaries on the *Maṇi* and the *Dīdhiti*. Jagadīśa and Gadādhara were the greatest exponents of *navya-nyāya* as represented by the *Maṇi* and the *Dīdhiti*, and flourished in the earlier part of the seventeeth century. Jagadīśa is famous as the author of the commentary on the *Dīdhiti*, popularly known as *Jāgadīśī*, the *Śabdaśaktiprakāśikā*—an independent treatise on the speculative Semantics of Nyāya, a short manual called the *Tarkāmṛta* and a commentary called the *Bhāṣya-sūkti* on the Bhāṣya of Praśastapāda. Gadādhara is famous as the author of the commentary, popularly known as the *Gādādharī*, on the *Dīdhiti*, the commentary called the *Mūlagādādharī* on portions of the *Maṇi*, commentaries on Udayana's *Ātmatattvaviveka*, and fifty-two dialectic tracts and treatises—such as the *Vyutpattivāda* and and *Śaktivada* (dialectic treatises on the speculative Semantics of Nyāya). The more important works of Jagadīśa and Gadādhara are still studied carefully by

those students who seek to specialise in *navya-nyāya* and they are regarded as constituting an indispensable discipline of high value to every scholar who wishes to be recognised as a sound *śāstrin*. The dialectic literature of later Nyāya is a vast *banyan tree*, which had its roots struck deep and its huge trunk fully developed in Mithilā in the *Tattvacintāmaṇi*, had its immense branches and foliage stretched out and ramified in the *Dīdhiti* in Nuddea, and bore fruit in the rich fruitage of *Jāgadīśī* and *Gādādharī*, which formed the colossal monument of Indian dialectics in the seventeenth century. If Raghunātha is regarded as the crest-jewel (*śiromaṇi*) of logical dialecticians, Gadādhara may well be characterised as the prince of Nuddea dialecticians, who wears the diadem inlaid with this brilliant crest-jewel.

In the latter part of the seventeenth century, the Nyāya scholars interested themselves chiefly in the interpretation of the earlier and later works on Nyāya and in the production of introductory hand-books. Three of such scholars may be mentioned here—Śaṁkara-miśra, Viśvanātha-pañcānana and Annambhaṭṭa. Śaṁkara-miśra wrote a commentary on the *Jāgadīśī* and a comprehensive commentary called the *Upaskāra* on Kaṇāda's sūtras. Viśvanātha-pañcānana wrote a commentary on the Nyāya-sūtras in 1634; and he is famous as the author of the popular hand-book of the Nyāya-Vaiśeṣika system, called the *Bhāṣāpariccheda* or *Kārikāvalī*, which consists of 168 easy verses. The *Kārikāvalī* is accompanied by the author's own commentary called the *Nyāyasiddhāntamuktāvalī*. Accord-

ing to the traditional methods of study, the *Muktāvalī* is widely studied by students of Nyāya, immediately after finishing the study of Annambhaṭṭa's *Tarkasaṁgraha* and *Dīpikā*.

Annambhaṭṭa was an Andhra scholar who flourished in the latter part of the seventeenth century. He was a versatile scholar and a reputed polymath. He wrote several learned works on almost all the important branches of Śāstraic learning. In this connection, attention may be invited to some of Annambhaṭṭa's known works. In the sphere of Pūrvamīmāṁsā and Vedānta, he is known as the author of the massive commentary called the *Rāṇakojjīvanī* on Bhaṭṭa Someśvara's *Nyāya-sudhā*, otherwise known as *Rāṇaka*, and of a commentary on the Brahma-sūtras. In Vyākaraṇa, he is famous as the author of an easy commentary on Pāṇini's *Aṣṭādhyāyī* and of an extensive commentary called *Uddyotana* on Kaiyaṭa's *Pradīpa*. In the sphere of the Nyāya-Vaiśeṣika system, he wrote a learned commentary called *Siddhāñjana* on Jayadeva's *Maṇyāloka*, as also the most popular handbook of Indian logic called the *Tarkasaṁgraha* and its expository and supplementary gloss called the *Dīpikā*. The name *Tarkasaṁgraha* is interpreted by Annambhaṭṭa himself as a compendious elucidation of the nature of substance, qualities and such other ontological categories of the Vaiśeṣika system, which are accepted by Nyāya. These two works —the *Tarkasaṁgraha* and the *Dīpikā*—fulfil the object mentioned in the concluding verse of the *Tarka*

saṁgraha and are described by some as miniature *Gādādharī* (*Bālagādādharī*), in the sense that they, taken together, miniature the later Nyāya dialectics also.

SECTION VIII

CONCLUDING REMARKS

The Nyāya-Vaiśeṣika system originated in the rationalistic tendency of the Upaniṣadic age. The original current of rationalistic thought came to be broken into two streams, the *Vedistic* Nyāya and the *anti-vedistic* Vaiśeṣika, After some time, there was a rapprochement between these two schismatic developments. The Vaiśeṣika emphasis on the inductive side of reasoning, together with its realism and pluralism, served as the basis for the development of the Nyāya theory of deductive reasoning through a well-defined scheme of syllogistic expression. All along, the Vaiśeṣika and the Nyāya have been treated as sister systems (*samāna-tantra*) with a common rationalistic stress and realistic background, in spite of certain epistemological and ontological differences. The Nyāya-Vaiśeṣika is a self-contained system of philosophy. Its roots strike deep into its pluralistic realism. Its scheme of external relation, its theory of truth and error, and its creationistic view of causation (*see* Part III) constitute its mainstay. Its thought-measuring devices and precise formulas form its ever-spreading and never-fading foliage. Its fruit is the virile, though negativistic, doctrine of

abhāva (non-existence) and *apavarga* (final liberation). Its chief solace and comfort is in its rationalistic theism, with its demiurgic, omnipotent and omniscient *Īśvara*. Its chief boast is its logical and dialectic machinery, which the believers and the heretics, the *Āstikas* and the *Nāstikas* alike, cannot do without. Whoever knows *Nyāya*, knows the *pramāṇa*—is a *pramāṇavit*, a philosopher in the strict sense, according to Indian tradition.

॥ श्रीः ॥

॥ तर्कसंग्रहः ॥

A PRIMER OF INDIAN LOGIC

PART II

TEXT

प्रत्यक्षपरिच्छेदः

1. निधाय हृदि विश्वेशं विधाय गुरुवन्दनम् ।
बालानां सुखबोधाय क्रियते तर्कसंग्रहः ॥

2. द्रव्य-गुण-कर्म-सामान्य-विशेष-समवायाभावाः सप्त पदार्थाः ॥

3. (a) तत्र द्रव्याणि पृथिव्यप्-तेजो-वाय्वाकाश-काल-दिग्-आत्म-मनांसि नवैव ॥

(b) रूप-रस-गन्ध-स्पर्श-संख्या-परिमाण-पृथक्त्व-संयोग-विभाग-परत्वापरत्व-गुरुत्व-द्रवत्व-स्नेह - शब्द - बुद्धि-सुख-दुःखेच्छा-द्वेष-प्रयत्न-धर्माधर्म-संस्काराः चतुर्विंशतिर्गुणाः ॥

(c) उत्क्षेपणावक्षेपणाकुञ्चन – प्रसारण – गमनानि पञ्च कर्माणि ॥

(d) परम् अपरं चेति द्विविधं सामान्यम् ॥

(e) नित्यद्रव्यवृत्तयो विशेषास्तु अनन्ता एव ॥

(f) समवायस्तु एक एव ॥

PRATYAKṢA-PARICCHEDAḤ

1. *Nidhāya hṛdi viśveśaṁ vidhāya guruvandanam| Bālānāṁ sukhabodhāya kriyate tarkasaṁgrahaḥ||*

2. *Dravya-guṇa-karma-sāmānya-viśeṣa-samavāyābhāvāḥ sapta padārthāḥ.*

3. (a) *Tatra dravyāṇi pṛthivyap-tejo-vāyvākāśa-kāla-dik-ātma-manāṁsi navaiva.*

(b) *Rūpa-rasa-gandha-sparśa-saṅkhyā-parimāṇa-pṛthaktva-saṁyoga-vibhāga-paratva-aparatva - gurutva-dravatva - sneha - śabda - buddhi - sukha-duḥkha -icchā - dveṣa-prayatna-dharmādharma-saṁskārāḥ caturviṁśatir guṇāḥ.*

(c) *Utkṣepaṇa - avakṣepaṇa - ākuñcana-prasāraṇa-gamanāni pañca karmāṇi.*

(d) *Param, aparam ceti dvividham sāmānyam.*

(e) *Nityadravyavṛttayo viśeṣāstu anantā eva.*

(f) *Samavāyastu eka eva.*

(g) अभावः चतुर्विधः, प्रागभावः, प्रध्वंसाभावः, अत्यन्ताभावः, अन्योन्याभावश्च इति ॥

4. तत्र गन्धवती पृथिवी । सा द्विविधा, नित्या अनित्या च । नित्या परमाणुरूपा । अनित्या कार्यरूपा । पुनः त्रिविधा, शरीरेन्द्रियविषयभेदात् । शरीरमस्मदादीनाम् । इन्द्रियं गन्धग्राहकं घ्राणम्, तच्च नासाग्रवर्ति । विषयो मृत्पाषाणादिः ॥

5. शीतस्पर्शवत्यः आपः । ताः द्विविधाः, नित्याः अनित्याश्च । नित्याः परमाणुरूपाः । अनित्याः कार्यरूपाः । पुनः त्रिविधाः, शरीरेन्द्रियविषयभेदात् । शरीरं वरुणलोके । इन्द्रियं रसग्राहकं रसनं जिह्वाग्रवर्ति । विषयः सरित्-समुद्रादिः ॥

6. उष्णस्पर्शवत् तेजः । तच्च द्विविधम्, नित्यमनित्यं च । नित्यं परमाणुरूपम् । अनित्यं कार्यरूपम् । पुनः त्रिविधं, शरीरेन्द्रियविषयभेदात् । शरीरम् आदित्यलोके प्रसिद्धम् । इन्द्रियं रूपग्राहकं चक्षुः कृष्णताराग्रवर्ति । विषयः चतुर्विधः, भौम-दिव्योदर्याकरजभेदात् । भौमं वह्न्यादिकम् । अबिन्धनं दिव्यं विद्युदादि । भुक्तस्य परिणामहेतुरुदर्यम् । आकरजं सुवर्णादि ॥

(g) *Abhāvaḥ caturvidhaḥ, prāgabhāvaḥ, pradhvaṁsābhāvaḥ, atyantābhāvaḥ, anyonyābhāvaśca iti.*

4. *Tatra gandhavatī pṛthivī. Sā dvividhā, nityā, anityā ca. Nityā paramāṇurūpā. Anityā kāryarūpā. Punaḥ trividhā, śarīra-indriya-viṣaya-bhedāt. Śarīraṁ asmadādīnām. Indriyaṁ gandhagrāhakaṁ ghrāṇam, tacca nāsāgravarti. Viṣayo mṛtpāṣāṇādiḥ.*

5. *Śītasparśavatyaḥ āpaḥ. Tāḥ dvividhāḥ, nityāḥ, anityāśca. Nityāḥ paramāṇurūpāḥ. Anityāḥ kāryarūpāḥ. Punaḥ trividhāḥ, śarīra-indriya-viṣaya-bhedāt. Śarīraṁ varuṇaloke. Indriyaṁ rasagrāhakaṁ rasanaṁ jihvāgravarti. Viṣayaḥ sarit-samudrādiḥ.*

6. *Uṣṇasparśavat tejaḥ. Tacca dvividham, nityam anityaṁ ca. Nityam paramāṇurūpam. Anityam kāryarūpam. Punaḥ trividham, śarīra-indriya-viṣaya-bhedāt. Śarīram ādityaloke prasiddham. Indriyaṁ rūpagrāhakaṁ cakṣuḥ kṛṣṇatārāgravarti. Viṣayaḥ caturvidhaḥ, bhauma - divya-udarya - ākaraja-bhedāt. Bhaumaṁ vahnyādikam. Abindhanaṁ divyam vidyudādi. Bhuktasya pariṇāmaheturudaryam. Ākarajaṁ suvarṇādi.*

7. रूपरहितः स्पर्शवान् वायुः । स द्विविधः, नित्यः अनित्यश्च । नित्यः परमाणुरूपः । अनित्यः कार्यरूपः । पुनः त्रिविधः, शरीरेन्द्रियविषयभेदात् । शरीरं वायुलोके । इन्द्रियं स्पर्शग्राहकं त्वक् सर्वशरीरवर्ति । विषयो वृक्षादिकम्पनहेतुः । शरीरान्तःसंचारी वायुः प्राणः । स च एकोऽपि उपाधिभेदात् प्राणापानादिसंज्ञां लभते ॥

8. शब्दगुणकमाकाशम् । तच्च एकं, विभु, नित्यं च ॥

9. अतीतादिव्यवहारहेतुः कालः । स च एको, विभुः, नित्यश्च ॥

10. प्राच्यादिव्यवहारहेतुः दिक् । सा च एका, विभ्वी, नित्या च ॥

11. ज्ञानाधिकरणमात्मा, स द्विविधः, जीवात्मा परमात्मा चेति । तत्र ईश्वरः सर्वज्ञः परमात्मा एक एव । जीवस्तु प्रतिशरीरं भिन्नो, विभुः, नित्यश्च ॥

12. सुखाद्युपलब्धिसाधनमिन्द्रियं मनः । तच्च प्रत्यात्मनियतत्वात् अनन्तं, परमाणुरूपं, नित्यं च ॥

13. चक्षुर्मात्रग्राह्यो गुणो रूपम् । तच्च शुक्ल-नील-पीत-रक्त-हरित-कपिश-चित्रभेदात् सप्तविधम् । पृथिवी-जल-तेजोवृत्ति । तत्र पृथिव्यां सप्तविधम् । अभास्वरशुक्लं जले । भास्वरशुक्लं तेजसि ॥

7. *Rūparahitaḥ sparśavān vāyuḥ. Sa dvividhaḥ, nityaḥ, anityaśca. Nityaḥ paramāṇurūpaḥ. Anityaḥ kāryarūpaḥ. Punaḥ trividhaḥ, śarīra-indriya-viṣaya-bhedāt. Śarīraṁ vāyuloke. Indriyaṁ sparśagrāhakaṁ tvak sarvaśarīravarti. Viṣayo vṛkṣādikampanahetuḥ. Śarīrāntaḥ-sañcārī vāyuḥ prāṇaḥ. Sa ca eko'pi upādhi-bhedāt prāṇāpānādi-saṁjñāṁ labhate.*

8. *Śabdaguṇakam ākāśam. Tacca ekaṁ, vibhu, nityaṁ ca.*

9. *Atītādivyavahārahetuḥ kālaḥ. Sa ca eko, vibhuḥ, nityaśca.*

10. *Prācyādivyavahārahetuḥ dik. Sā ca ekā, vibhvī, nityā ca.*

11. *Jñānādhikaraṇam ātmā. Sa dvividhaḥ, jīvātmā paramātmā ceti. Tatra Īśvaraḥ paramātmā eka eva. Jīvastu pratiśarīraṁ bhinno, vibhuḥ, nityaśca.*

12. *Sukhādyupalabdhisādhanaṁ indriyaṁ manaḥ. Tacca pratyātmaniyatatvāt anantam, paramāṇurūpam, nityam ca.*

13. *Cakṣurmātragrāhyo guṇo rūpam. Tacca śukla-nīla-pīta-rakta-harita-kapiśa-citrabhedāt sapta-vidham. Pṛthivī-jala-tejovṛtti. Tatra pṛthivyām sapta-vidham. Abhāsvaraśuklaṁ jale. Bhāsvaraśuklaṁ tejasi.*

14. रसनग्राह्यो गुणो रसः। स च मधुराम्ल-लवण-कटु-कषाय-तिक्तभेदात् षड्विधः। पृथिवी-जलवृत्तिः। तत्र पृथिव्यां षड्विधः। जले मधुर एव ॥

15. घ्राणग्राह्यो गुणो गन्धः। स द्विविधः, सुरभिः, असुरभिश्च। पृथिवीमात्रवृत्तिः ॥

16. त्वगिन्द्रियमात्रग्राह्यो गुणः स्पर्शः। स च त्रिविधः। शीतोष्णानुष्णाशीतभेदात्। पृथिव्यप्तेजो-वायुवृत्तिः। तत्र शीतः जले। उष्णः तेजसि। अनुष्णाशीतः पृथिवीवाय्वोः ॥

17. रूपादिचतुष्टयं पृथिव्यां पाकजमनित्यं च। अन्यत्र अपाकजं नित्यमनित्यं च। नित्यगतं नित्यम्। अनित्यगतमनित्यम् ॥

18. एकत्वादिव्यवहारहेतुः संख्या। सा नवद्रव्यवृत्तिः, एकत्वादिपरार्धपर्यन्ता। एकत्वं नित्यमनित्यं च। नित्यगतं नित्यम्। अनित्यगतमनित्यम्। द्वित्वादिकं तु सर्वत्र अनित्यमेव ॥

19. मानव्यवहारकारणं परिमाणम्। नवद्रव्यवृत्ति। तच्चतुर्विधम्, अणु महत् दीर्घं ह्रस्वं चेति ॥

20. पृथग्व्यवहारकारणं पृथक्त्वम्। सर्वद्रव्यवृत्ति ॥

14. *Rasanagrāhyo guṇo rasaḥ. Sa ca madhura-amla - lavaṇa-kaṭu - kaṣāya - tiktabhedāt ṣaḍvidhaḥ. Pṛthivī-jalavṛttiḥ. Tatra pṛthivyāṁ ṣaḍvidhaḥ. Jale madhura eva.*

15. *Ghrāṇagrāhyo guṇo gandhaḥ. Sa dvividhaḥ, surabhiḥ asurabhiśca. Pṛthivīmātravṛttiḥ.*

16. *Tvagindriyamātragrāhyo guṇaḥ sparśaḥ. Sa ca trividhaḥ, śīta-uṣṇa-anuṣṇāśītabhedāt. Pṛthivyap-tejo-vāyuvṛttiḥ. Tatra śītaḥ jale. Uṣṇaḥ tejasi. Anuṣṇāśītaḥ pṛthivīvāyvoḥ.*

17. *Rūpādicatuṣṭayam pṛthivyām pākajam anityaṁ ca. Anyatra apākajaṁ nityam anityaṁ ca. Nityagataṁ nityam. Anityagatam anityaṁ.*

18. *Ekatvādivyavahārahetuḥ saṅkhyā. Sā navadravyavṛttiḥ, ekatvādi-parārdhaparyantā. Ekatvaṁ nityam anityaṁ ca. Nityagataṁ nityam. Anityagatam anityam. Dvitvādikaṁ tu sarvatra anityameva.*

19. *Mānavyavahārakāraṇaṁ parimāṇam, Navadravyavṛtti. Taccaturvidham, aṇu, mahat, dīrgham, hrasvaṁ ceti.*

20. *Pṛthagvyavahārakāraṇaṁ pṛthaktvam. Sarvadravyavṛtti.*

21. संयुक्तव्यवहारहेतुः संयोगः । सर्वद्रव्यवृत्तिः ॥

22. संयोगनाशको गुणो विभागः । सर्वद्रव्यवृत्तिः ॥

23. परापरव्यवहारासाधारणकारणे परत्वापरत्वे । पृथिव्यादिचतुष्टयमनोवृत्तिनी । ते द्विविधे, दिक्कृते कालकृते च । दूरस्थे दिक्कृतं परत्वम् । समीपस्थे दिक्कृतम् अपरत्वम् । ज्येष्ठे कालकृतं परत्वम् । कनिष्ठे कालकृतम् अपरत्वम् ॥

24. आद्यपतनासमवायिकारणं गुरुत्वम्, पृथिवी-जलवृत्ति ॥

25. आद्यस्यन्दनासमवायिकारणं द्रवत्वम्, पृथिव्य-प्तेजोवृत्ति । तद्द्विविधम्, सांसिद्धिकं नैमित्तिकं च । सांसिद्धिकं जले । नैमित्तिकं पृथिवीतेजसोः । पृथिव्यां घृतादावग्निसंयोगजं द्रवत्वम् । तेजसि सुवर्णादौ ॥

26. चूर्णादिपिण्डीभावहेतुः गुणः स्नेहः, जलमात्रवृत्तिः ॥

27. श्रोत्रग्राह्यो गुणः शब्दः, आकाशमात्रवृत्तिः । स द्विविधः, ध्वन्यात्मकः वर्णात्मकश्च । तत्र ध्वन्यात्मकः भेर्यादौ । वर्णात्मकः संस्कृतभाषादिरूपः ॥

21. *Saṁyuktavyavahārahetuḥ saṁyogaḥ. Sarvadravyavṛttiḥ.*

22. *Saṁyoganāśako guṇo vibhāgaḥ. Sarvadravyavṛttiḥ.*

23. *Parāparavyavahārāsādhāraṇakāraṇe paratvāparatve. Pṛthivyādicatuṣṭayamanovṛttinī. Te dvividhe, dikkṛte kālakṛte ca. Dūrasthe dikkṛtaṁ paratvam. Samīpasthe dikkṛtam aparatvam. Jyeṣṭhe kālakṛtaṁ paratvam. Kaniṣṭhe kālakṛtam aparatvam.*

24. *Ādyapatanāsamavāyikāraṇaṁ gurutvam, pṛthivījalavṛtti.*

25. *Ādyasyandanāsamavāyikāraṇaṁ dravatvam, pṛthivyaptejovṛtti. Taddvividham, sāṁsiddhikaṁ, naimittikaṁ ca. Sāṁsiddhikaṁ jale. Naimittikaṁ pṛthivītejasoḥ. Pṛthivyāṁ ghṛtādāvagnisaṁyogajaṁ dravatvam. Tejasi suvarṇādau.*

26. *Cūrṇādipiṇḍībhāvahetuḥ guṇaḥ snehaḥ, jalamātravṛttiḥ.*

27. *Śrotragrāhyo guṇaḥ śabdaḥ, ākāśamātravṛttiḥ. Sa dvividhaḥ, dhvanyātmakaḥ varṇātmakaśca. Tatra dhvanyātmakaḥ bheryādau. Varṇātmakaḥ saṁskṛtabhāṣādirūpaḥ.*

28. (a) सर्वव्यवहारहेतुः ज्ञानं बुद्धिः । सा द्विविधा, स्मृतिः अनुभवश्च ॥

(b) संस्कारमात्रजन्यं ज्ञानं स्मृतिः ॥

(c) तद्भिन्नं ज्ञानमनुभवः । स द्विविधः, यथार्थः अयथार्थश्च ॥

(d) तद्वति तत्प्रकारकः अनुभवः यथार्थः । सैव प्रमा इत्युच्यते ॥

(e) तदभाववति तत्प्रकारकः अनुभवः अयथार्थः ॥

(f) यथार्थानुभवः चतुर्विधः, प्रत्यक्षानुमित्युपमितिशाब्दभेदात् ॥

(g) तत्करणमपि चतुर्विधम्, प्रत्यक्षानुमानोपमानशब्दभेदात् ॥

29. (a) असाधारणं कारणं करणम् ॥

(b) कार्यनियतपूर्ववृत्ति कारणम् ॥

(c) कार्यं प्रागभावप्रतियोगि ॥

(d) कारणं त्रिविधम्, समवाय्यसमवायिनिमित्तभेदात् ॥

(e) यत्समवेतं कार्यमुत्पद्यते तत् समवायिकारणम्; यथा तन्तवः पटस्य, पटश्च स्वगतरूपादेः ॥

28. (a) *Sarvavyavahārahetuḥ jñānam buddhiḥ. Sā dvividhā, smṛtiḥ, anubhavaśca.*

(b) *Saṁskāramātrajanyaṁ jñānaṁ smṛtiḥ.*

(c) *Tadbhinnaṁ jñānam anubhavaḥ. Sa dvividhaḥ, yathārthaḥ, ayathārthaśca.*

(d) *Tadvati tatprakārakaḥ anubhavaḥ yathārthaḥ. Saiva pramā ityucyate.*

(e) *Tadabhāvavati tatprakārakaḥ anubhavaḥ ayathārthaḥ.*

(f) *Yathārthānubhavaḥ caturvidhaḥ, pratyakṣa-anumiti-upamiti-śābdabhedāt.*

(g) *Tatkaraṇaṁ api caturvidham, pratyakṣa-anumāna-upamāna-śabdabhedāt.*

29. (a) *Asādhāraṇam kāraṇam karaṇam.*

(b) *Kāryaniyatapūrvavṛtti kāraṇam.*

(c) *Kāryam prāgabhāvapratiyogi.*

(d) *Kāraṇam trividham, samavāyi-asamavāyi-nimittabhedāt.*

(e) *Yatsamavetam kāryam utpadyate tat samavāyi-kāraṇam; yathā tantavaḥ paṭasya; paṭaśca svagatarūpādeḥ.*

(f) कार्येण कारणेन वा सह एकस्मिन् अर्थे समवेतं सत् कारणमसमवायिकारणम् ; यथा तन्तुसंयोगः पटस्य, तन्तुरूपं पटरूपस्य ॥

(g) तदुभयभिन्नं कारणं निमित्तकारणम् ; यथा तुरीवेमादिकं पटस्य ॥

(h) तदेतत्त्रिविधकारणमध्ये यदसाधारणं कारणं तदेव करणम् ॥

30. (a) तत्र प्रत्यक्षज्ञानकरणं प्रत्यक्षम् ॥

(b) इन्द्रियार्थसन्निकर्षजन्यं ज्ञानं प्रत्यक्षम् । तत् द्विविधम्, निर्विकल्पकं सविकल्पकं चेति ॥

(c) तत्र निष्प्रकारकं ज्ञानं निर्विकल्पकम् ।

(d) सप्रकारकं ज्ञानं सविकल्पकम् । यथा 'डित्थः अयम्', 'ब्राह्मणः अयम्', 'श्यामः अयम्', 'पाचकः अयम्' इति ॥

(e) प्रत्यक्षज्ञानहेतुः इन्द्रियार्थसन्निकर्षः षड्विधः —संयोगः, संयुक्तसमवायः, संयुक्तसमवेतसमवायः, समवायः, समवेतसमवायः, विशेषणविशेष्यभावश्च इति ।

(f) *Kāryeṇa kāraṇena vā saha ekasmin arthe samavetam sat kāraṇam asamavāyikāraṇam; yathā tantusaṁyogaḥ paṭasya, tanturūpam paṭarūpasya.*

(g) *Tadubhayabhinnam kāraṇam nimittakāraṇam; yathā turīvemādikam paṭasya.*

(h) *Tadetattrividhakāraṇamadhye yadasādhāraṇam kāraṇam tadeva karaṇam.*

30. (a) *Tatra pratyakṣajñānakaraṇam pratyakṣam.*

(b) *Indriyārthasannikarṣajanyam jñānam pratyakṣam. Tat dvividham, nirvikalpakam savikalpakam ceti.*

(c) *Tatra niṣprakārakaṁ jñānaṁ nirvikalpakam.*

(d) *Saprakārakam jñānam savikalpakam. Yathā 'Ḍitthaḥ ayam', 'Brāhmaṇaḥ ayam', 'śyāmaḥ ayam', 'Pācakaḥ ayam' iti.*

(e) *Pratyakṣajñānahetuḥ indriyārthasannikarṣaḥ ṣaḍvidhaḥ—saṁyogaḥ, saṁyuktasamavāyaḥ, saṁyuktasamavetasamavāyaḥ, samavāyaḥ, samavetasamavāyaḥ, viśeṣaṇaviśeṣyabhāvaśca iti.*

चक्षुषा घटप्रत्यक्षजनने संयोगः सन्निकर्षः । घटरूपप्रत्यक्षजनने संयुक्तसमवायः सन्निकर्षः, संयुक्ते घटे रूपस्य समवायात् ।

रूपत्वसामान्यप्रत्यक्षे संयुक्तसमवेतसमवायः सन्निकर्षः, चक्षुस्संयुक्ते घटे रूपं समवेतम्, तत्र रूपत्वस्य समवायात् ।

श्रोत्रेण शब्दसाक्षात्कारे समवायः सन्निकर्षः, कर्णविवरवर्त्याकाशस्य श्रोत्रत्वात्, शब्दस्य आकाशगुणत्वात्, गुणगुणिनोश्च समवायात् । शब्दत्वसाक्षात्कारे समवेतसमवायः सन्निकर्षः, श्रोत्रसमवेते शब्दे शब्दत्वस्य समवायात् ॥

अभावप्रत्यक्षे विशेषणविशेष्यभावः सन्निकर्षः—'घटाभाववत् भूतलम्' इत्यत्र चक्षुःसंयुक्ते भूतले घटाभावस्य विशेषणत्वात् ॥

एवं सन्निकर्षषट्कजन्यं ज्ञानं प्रत्यक्षम्, तत्करणमिन्द्रियम् । तस्मादिन्द्रियं प्रत्यक्षप्रमाणम् इति सिद्धम् ॥

इति प्रत्यक्षपरिच्छेदः ॥

—:o:—

Cakṣuṣā ghaṭapratyakṣajanane saṁyogaḥ sannikarṣaḥ. Ghaṭarūpapratyakṣajanane saṁyuktasamavāyaḥ sannikarṣaḥ, saṁyukte ghaṭe rūpasya samavāyāt.

Rūpatvasāmānyapratyakṣe saṁyuktasamavetasamavāyaḥ sannikarṣaḥ, cakṣussaṁyukte ghaṭe rūpaṁ samavetaṁ, tatra rūpatvasya samavāyāt.

Śrotreṇa śabdasākṣātkāre samavāyaḥ sannikarṣaḥ, karṇavivaravartyākāśasya śrotratvāt, śabdasya ākāśaguṇatvāt, guṇaguṇinośca samavāyāt. Śabdatvasākṣātkāre samavetasamavāyaḥ sannikarṣaḥ, śrotrasamavete śabde śabdatvasya samavāyāt.

Abhāvapratyakṣe viśeṣaṇaviśeṣyabhāvaḥ sannikarṣaḥ—'ghaṭābhāvavat bhūtalaṁ' ityatra cakṣuḥsaṁyukte bhūtale ghaṭābhāvasya viśeṣaṇatvāt.

Evaṁ sannikarṣaṣaṭkajanyaṁ jñānaṁ pratyakṣaṁ, tatkaraṇaṁ indriyaṁ. Tasmād indriyaṁ pratyakṣapramāṇaṁ iti siddham.

Iti pratyakṣaparicchedaḥ.

—:o:—

अनुमानपरिच्छेदः

31. (a) अनुमितिकरणमनुमानम् ॥

(b) परामर्शजन्यं ज्ञानमनुमितिः ॥

(c) व्याप्तिविशिष्टपक्षधर्मताज्ञानं परामर्शः । यथा 'वह्निव्याप्यधूमवान् अयं पर्वतः' इति ज्ञानं परामर्शः । तज्जन्यं 'पर्वतो वह्निमान्' इति ज्ञानमनुमितिः ॥

(d) 'यत्र यत्र धूमः तत्राग्निः' इति साहचर्यनियमो व्याप्तिः ॥

(e) व्याप्यस्य पर्वतादिवृत्तित्वं पक्षधर्मता ॥

32. (a) अनुमानं द्विविधम्, स्वार्थं परार्थं च ॥

(b) स्वार्थं स्वानुमितिहेतुः । तथा हि—स्वयमेव भूयोदर्शनेन 'यत्र यत्र धूमः तत्र अग्निः' इति महानसादौ व्याप्तिं गृहीत्वा पर्वतसमीपं गतः, तद्गते च अग्नौ सन्दिहानः पर्वते धूमं पश्यन् व्याप्तिं स्मरति—'यत्र यत्र धूमः तत्र अग्निः' इति । तदनन्तरं 'वह्निव्याप्यधूमवान् अयं पर्वतः' इति ज्ञानमुत्पद्यते । अयमेव लिङ्गपरामर्श इत्युच्यते । तस्मात्

31. (a) *Anumitikaraṇam anumānam.*

(b) *Parāmarśajanyaṁ jñānam anumitiḥ.*

(c) *Vyāptiviśiṣṭapakṣadharmatājñānam parāmarśaḥ. Yathā 'Vahnivyāpyadhūmavān ayam parvataḥ' iti jñānam parāmarśaḥ. Tajjanyaṁ 'parvato vahnimān' iti jñānam anumitiḥ.*

(d) *'Yatra yatra dhūmaḥ tatrāgniḥ' iti sāhacaryaniyamo vyāptiḥ.*

(e) *Vyāpyasya parvatādivṛttitvam pakṣadharmatā.*

32. (a) *Anumānaṁ dvividham, svārtham parārtham ca.*

(b) *Svārtham svānumitihetuḥ. Tathā hi—svayameva bhūyodarśanena 'yatra yatra dhūmaḥ tatra agniḥ' iti mahānasādau vyāptim gṛhītvā parvatasamīpam gataḥ, tadgate ca agnau sandihānaḥ parvate dhūmam paśyan vyāptiṁ smarati—'yatra yatra dhūmaḥ tatra agniḥ' iti. Tadanantaram 'vahnivyāpyadhūmavān ayam parvataḥ' iti jñānam utpadyate. Ayam eva liṅgaparāmarśa ityucyate. Tasmāt 'parvato vahnimān'*

'पर्वतो वह्निमान्' इति ज्ञानमनुमितिः उत्पद्यते । तदेतत् स्वार्थानुमानम् ॥

(c) यत्तु स्वयं धूमात् अग्निम् अनुमाय परं प्रति बोधयितुं पञ्चावयववाक्यं प्रयुज्यते तत् परार्थानुमानम् । यथा—

पर्वतो वह्निमान् ।

धूमवत्त्वात् ।

यो यो धूमवान् स वह्निमान्, यथा महानसः ।

तथा च अयम् ।

तस्मात् तथा—इति ॥

अनेन प्रतिपादितात् लिङ्गात् परोऽपि अग्निं प्रतिपद्यते ।

33. (a) प्रतिज्ञाहेतूदाहरणोपनयनिगमनानि पञ्चावयवाः ।

'पर्वतो वह्निमान्' इति प्रतिज्ञा ।

'धूमवत्त्वात्' इति हेतुः ।

'यो यो धूमवान् स वह्निमान्, यथा महानसः' इति उदाहरणम् ।

iti jñānam anumitiḥ utpadyate. Tadetat svārthānumānam.

(c) *Yattu svayam dhūmāt agnim anumāya param prati bodhayitum pañcāvayavavākyam prayujyate tat parārthānumānam. Yathā—*

Parvato vahnimān.

Dhūmavattvāt.

Yo yo dhūmavān sa vahnimān, yathā mahānasaḥ.

Tathā ca ayam.

Tasmāt tathā—iti.

Anena pratipāditāt liṅgāt paro'pi agnim pratipadyate.

33. (a) *Pratijñā-hetu-udāharaṇa-upanaya—nigamanāni pañcāvayavāḥ.*

'Parvato vahnimān' iti pratijñā.

'Dhūmavattvāt' iti hetuḥ.

'Yo yo dhūmavān sa vahnimān, yathā mahānasaḥ' iti udāharaṇam.

'तथा च अयम्' इति उपनयः ।

'तस्मात् तथा' इति निगमनम् ।

(b) स्वार्थानुमितिपरार्थानुमित्योः लिङ्गपरामर्श एव करणम् । तस्मात् लिङ्गपरामर्शः अनुमानम् ॥

34. (a) लिङ्गं त्रिविधम्, अन्वयव्यतिरेकि, केवलान्वयि, केवलव्यतिरेकि च इति ।

(b) अन्वयेन व्यतिरेकेण च व्याप्तिमत् अन्वयव्यतिरेकि; यथा—वह्नौ साध्ये धूमवत्त्वम् । 'यत्र धूमः तत्र अग्निः, यथा महानसे' इति अन्वयव्याप्तिः । 'यत्र वह्निः नास्ति तत्र धूमोऽपि नास्ति, यथा ह्रदे' इति व्यतिरेकव्याप्तिः ॥

(c) अन्वयमात्रव्याप्तिकं केवलान्वयि; यथा—'घटः अभिधेयः प्रमेयत्वात्, पटवत्' । अत्र प्रमेयत्वाभिधेयत्वयोः व्यतिरेकव्याप्तिः नास्ति, सर्वस्यापि प्रमेयत्वात् अभिधेयत्वाच्च ॥

(d) व्यतिरेकमात्रव्याप्तिकं केवलव्यतिरेकि; यथा—पृथिवी इतरेभ्यो भिद्यते गन्धवत्त्वात्; यत् इतरेभ्यो न भिद्यते न तत् गन्धवत्, यथा जलम्; न च इयं तथा; तस्मात् न तथा—इति । अत्र 'यत् गन्धवत् तत् इतरभिन्नम्' इत्यन्वयदृष्टान्तो नास्ति, पृथिवीमात्रस्य पक्षत्वात् ॥

'Tathā ca ayam' iti upanayaḥ.

'Tasmāt tathā' iti nigamanam.

(b) *Svārthānumiti-parārthānumityoḥ liṅga-parāmarśa eva karaṇam. Tasmāt liṅgaparāmarśaḥ anumānam.*

34. (a) *Liṅgam trividham, anvayavyatireki, kevalānvayi, kevalavyatireki ca iti.*

(b) *Anvayena vyatirekeṇa ca vyāptimat anvayavyatireki; yathā—vahnau sādhye dhūmavattvam 'Yatra dhūmaḥ tatra agniḥ, yathā mahānase' iti anvayavyāptiḥ. 'Yatra vahniḥ nāsti tatra dhūmo'pi nāsti, yathā hrade' iti vyatirekavyāptiḥ.*

(c) *Anvayamātravyāptikam kevalānvayi; yathā—'ghaṭaḥ abhidheyaḥ prameyatvāt, paṭavat.' Atra prameyatva-abhidheyatvayoḥ vyatirekavyāptiḥ nāsti, sarvasyāpi prameyatvād abhidheyatvācca.*

(d) *Vyatirekamātravyāptikam kevalavyatireki; yathā—pṛthivī itarebhyo bhidyate, gandhavattvāt; yad itarebhyo na bhidyate na tad gandhavat, yathā jalam; na ca iyam tathā; tasmāt na tathā iti. Atra 'yat gandhavat tad itarabhinnam' ityanvayadṛṣṭāntaḥ nāsti, pṛthivīmātrasya pakṣatvāt.*

35. (a) सन्दिग्धसाध्यवान् पक्षः, यथा धूमवत्त्वे हेतौ पर्वतः ॥

(b) निश्चितसाध्यवान् सपक्षः, यथा तत्रैव महानसः ॥

(c) निश्चितसाध्याभाववान् विपक्षः, यथा तत्रैव ह्रदः ॥

36. (a) सव्यभिचारविरुद्धसत्प्रतिपक्षासिद्धबाधिताः पञ्च हेत्वाभासाः ॥

(b) सव्यभिचारः अनैकान्तिकः । स त्रिविधः—साधारणासाधारणानुपसंहारिभेदात् । तत्र साध्याभाववद्वृत्तिः साधारणः अनैकान्तिकः, यथा 'पर्वतो वह्निमान् प्रमेयत्वात्' इति ; प्रमेयत्वस्य वह्न्यभाववति ह्रदे विद्यमानत्वात् ॥

सर्वसपक्षविपक्षव्यावृत्तः पक्षमात्रवृत्तिः असाधारणः ; यथा 'शब्दो नित्यः शब्दत्वात्' इति । शब्दत्वं सर्वेभ्यः नित्येभ्यः अनित्येभ्यश्च व्यावृत्तं शब्दमात्रवृत्ति ॥

अन्वयव्यतिरेकदृष्टान्तरहितः अनुपसंहारी ; यथा 'सर्वमनित्यं प्रमेयत्वात्' इति । अत्र सर्वस्यापि पक्षत्वात् दृष्टान्तो नास्ति ॥

35. (a) *Sandigdhasādhyavān pakṣaḥ, yathā dhūmavattve hetau parvataḥ.*

(b) *Niścitasādhyavān sapakṣaḥ, yathā tatraiva mahānasaḥ.*

(c) *Niścitasādhyābhāvavān vipakṣaḥ, yathā tatraiva hradaḥ.*

36. (a) *Savyabhicāra-viruddha-satpratipakṣa-asiddha-bādhitāḥ pañca hetvābhāsāḥ.*

(d) *Savyabhicāraḥ anaikāntikaḥ. Sa trividhaḥ —sādhāraṇa-asādhāraṇa-anupasaṁhāribhedāt. Tatra sādhyābhāvavadvṛttiḥ sādhāraṇaḥ anaikāntikaḥ, yathā 'parvato vahnimān, prameyatvāt' iti; prameyatvasya vahnyabhāvavati hrade vidyamānatvāt.*

Sarvasapakṣavipakṣavyāvṛttaḥ pakṣamātravṛttiḥ asādhāraṇaḥ; yathā 'śabdo nityaḥ, śabdatvāt' iti. Śabdatvaṁ sarvebhyaḥ nityebhyaḥ anityebhyaśca vyāvṛttaṁ śabdamātravṛtti.

Anvayavyatirekadṛṣṭāntarahitaḥ anupasaṁhārī; yathā 'sarvam anityam, prameyatvāt' iti. Atra sarvasyāpi pakṣatvāt dṛṣṭānto nāsti.

(c) साध्याभावव्याप्तो हेतुः विरुद्धः; यथा 'शब्दः नित्यः कृतकत्वात्' इति। कृतकत्वं हि नित्यत्वाभावेन अनित्यत्वेन व्याप्तम् ॥

(d) साध्याभावसाधकं हेत्वन्तरं यस्य स सत्प्रतिपक्षः; यथा 'शब्दो नित्यः श्रावणत्वात् शब्दत्ववत्', 'शब्दः अनित्यः कार्यत्वात् घटवत्' ॥

(e) असिद्धः त्रिविधः—आश्रयासिद्धः, स्वरूपासिद्धः, व्याप्यत्वासिद्धश्च इति ॥

आश्रयासिद्धः यथा 'गगनारविन्दं सुरभि, अरविन्दत्वात्, सरोजारविन्दवत्'। अत्र गगनारविन्दमाश्रयः, स च नास्त्येव ॥

स्वरूपासिद्धो यथा 'शब्दो गुणः चाक्षुषत्वात्, रूपवत्'। अत्र चाक्षुषत्वं शब्दे नास्ति, शब्दस्य श्रावणत्वात् ॥

सोपाधिको हेतुः व्याप्यत्वासिद्धः। साध्यव्यापकत्वे सति साधनाव्यापकत्वमुपाधिः। साध्यसमानाधिकरणात्यन्ताभावाप्रतियोगित्वं साध्यव्यापकत्वम्। साधनवन्निष्ठात्यन्ताभावप्रतियोगित्वं साधनाव्यापकत्वम्। 'पर्वतो धूमवान्, वह्निमत्त्वात्' इत्यत्र आर्द्रेन्धनसंयोगः उपाधिः। 'यत्र धूमः तत्र आर्द्रेन्धनसंयोगः' इति साध्यव्यापकता। 'यत्र वह्निः तत्र

(c) *Sādhyābhāvavyāpto hetuḥ viruddhaḥ; yathā 'śabdaḥ nityaḥ kṛtakatvāt' iti. Kṛtakatvaṁ hi nityatvābhāvena anityatvena vyāptam.*

(d) *Sādhyābhāvasādhakaṁ hetvantaraṁ yasya sa satpratipakṣaḥ; yathā 'śabdo nityaḥ, śrāvaṇatvāt śabdatvavat,' 'śabdaḥ anityaḥ, kāryatvāt ghaṭavat'.*

(e) *Asiddhaḥ trividhaḥ—āśrayāsiddhaḥ, svarūpāsiddhaḥ vyāpyatvāsiddhaśca iti.*

Āśrayāsiddaḥ yathā 'gaganāravindam surabhi, aravindatvāt, sarojāravindavat'. Atra gaganāravindam āśrayaḥ, sa ca nāstyeva.

Svarūpāsiddho yathā 'sabdo guṇaḥ cākṣuṣatvāt, rūpavat.' Atra cākṣuṣatvaṁ śabde nāsti, śabdasya śrāvaṇatvāt.

Sopādhiko hetuḥ vyāpyatvāsiddhaḥ. Sādhyavyāpakatve sati sādhanāvyāpakatvaṁ upādhiḥ. Sādhyasamānādhikaraṇa-atyantābhāva - apratiyogitvam sādhyavyāpakatvam. Sādhanavanniṣṭha-atyantābhāvapratiyogitvam sādhanāvyāpakatvam. 'Parvato dhūmavān, vahnimattvāt' ityatra ārdrendhanasaṁyogaḥ upādhiḥ.' Yatra dhūmaḥ tatra ārdrendhanasaṁyoga

आर्द्रेन्धनसंयोगो नास्ति, अयोगोलके आर्द्रेन्धनसंयोगाभावात्' इति साधनाव्यापकता । एवं साध्यव्यापकत्वे सति साधनाव्यापकत्वात् आर्द्रेन्धनसंयोगः उपाधिः । सोपाधिकत्वात् वह्निमत्त्वं व्याप्यत्वासिद्धम् ॥

(f) यस्य साध्याभावः प्रमाणान्तरेण निश्चितः स बाधितः—यथा 'वह्निः अनुष्णः द्रव्यत्वात्' इति । अत्र अनुष्णत्वं साध्यं, तदभावः उष्णत्वं स्पार्शनप्रत्यक्षेण गृह्यते इति बाधितत्वम् ॥

इति अनुमानपरिच्छेदः ।

उपमानपरिच्छेदः

37. उपमितिकरणं उपमानम् । संज्ञासंज्ञिसंबन्धज्ञानमुपमितिः, तत्करणं सादृश्यज्ञानम् । तथा हि—कश्चित् गवयपदार्थमजानन् कुतश्चित् आरण्यकपुरुषात् 'गोसदृशः गवयः' इति श्रुत्वा वनं गतः वाक्यार्थं स्मरन् गोसदृशं पिण्डं पश्यति । तदनन्तरम् 'असौ गवयपदवाच्यः' इत्युपमितिः उत्पद्यते ॥

इति उपमानपरिच्छेदः ।

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iti sādhyavyāpakatā. Yatra vahniḥ tatra ārdrendhana-saṁyogo 'nāsti, ayogolake ārdrendhanasaṁyogā-bhāvāt' iti sādhanāvyāpakatā. Evaṁ sādhya-vyāpakatve sati sādhanāvyāpakatvāt ārdrendhanasaṁ-yogaḥ upādhiḥ. Sopādhikatvāt vahnimattvam vyāpya-tvāsiddham.

(f) *Yasya sādhyābhāvaḥ pramāṇāntareṇa niścitaḥ sa bādhitaḥ—yathā 'vahniḥ anuṣṇaḥ, dravya-tvāt' iti. Atra anuṣṇatvaṁ sādhyaṁ, tadabhāvaḥ uṣṇatvaṁ spārśanapratyakṣeṇa gṛhyatē iti bādhitatvam.*

Iti anumānaparicchedaḥ.

UPAMĀNA-PARICCHEDAḤ

37. *Upamitikaraṇaṁ upamānam. Saṁjñā-saṁjñisambandhajñānam upamitiḥ, tatkaraṇaṁ sādṛ-śyajñānam. Tathā hi—kaścit gavayapadārthamajānan kutaścit āraṇyakapuruṣāt 'gosadṛśaḥ gavayaḥ' iti śrutvā vanam gataḥ vākyārthaṁ smaran gosadṛśaṁ piṇḍam paśyati. Tadanantaram 'asau gavayapadavācyaḥ' ityupamitiḥ utpadyate.*

Iti upamānaparicchedaḥ

शब्दपरिच्छेदः

38. (a) आप्तवाक्यं शब्दः । आप्तस्तु यथार्थवक्ता । वाक्यं पदसमूहः—यथा 'गामानय' इति ॥

(b) शक्तं पदम् । 'अस्मात् पदात् अयमर्थः बोद्धव्यः' इति ईश्वरसङ्केतः शक्तिः ॥

39. (a) आकाङ्क्षा योग्यता सन्निधिश्च वाक्यार्थज्ञाने हेतुः ॥

(b) पदस्य पदान्तरव्यतिरेकप्रयुक्तान्वयाननुभावकत्वमाकाङ्क्षा ॥

(c) अर्थाबाधो योग्यता ।

(d) पदानाम् अविलम्बेन उच्चारणं सन्निधिः ॥

(e) तथा च आकाङ्क्षादिरहितं वाक्यम् अप्रमाणम् । यथा 'गौः अश्वः पुरुषः हस्ती' इति न प्रमाणम्, आकाङ्क्षाविरहात् । 'वह्निना सिञ्चेत्' इति न प्रमाणं, योग्यताविरहात् । प्रहरे प्रहरे असहोच्चारितानि 'गाम् आनय' इत्यादिपदानि न प्रमाणं, सन्निध्यभावात् ॥

40. (a) वाक्यं द्विविधम्, वैदिकं लौकिकं च । वैदिकम् ईश्वरोक्तत्वात् सर्वमेव प्रमाणम् । लौकिकं तु आप्तोक्तं प्रमाणम्, अन्यदप्रमाणम् ॥

38. (a) *Āptavākyaṁ śabdaḥ. Āptastu yathārthavaktā. Vākyaṁ padasamūhaḥ—yathā 'gāṁ ānaya' iti.*

(b) *Śaktaṁ padaṁ. 'Asmāt padāt ayam arthaḥ boddhavyaḥ' iti īśvarasaṅketaḥ śaktiḥ.*

39. (a) *Ākāṅkṣā, yogyatā, sannidhiśca vākyārthajñāne hetuḥ.*

(b) *Padasya padāntaravyatirekaprayukta-anvaya-ananubhāvakatvaṁ ākāṅkṣā.*

(c) *Arthābādho yogyatā.*

(d) *Padānāṁ avilambena uccāraṇaṁ sannidhiḥ.*

(e) *Tathā ca ākāṅkṣādirahitaṁ vākyaṁ apramāṇaṁ. Yathā 'gauḥ aśvaḥ puruṣaḥ hastī' iti na pramāṇaṁ, ākāṅkṣāvirahāt. 'Vahninā siñcet' iti na pramāṇaṁ, yogyatāvirahāt. Prahare prahare asahoccāritāni 'gāṁ ānaya' ityādipadāni na pramāṇaṁ, sannidhyabhāvāt.*

40. (a) *Vākyaṁ dvividhaṁ, vaidikaṁ laukikaṁ ca. Vaidikaṁ īśvaroktatvāt sarvameva pramāṇaṁ. Laukikaṁ tu āptoktaṁ pramāṇaṁ, anyat apramāṇaṁ.*

(b) वाक्यार्थज्ञानं शाब्दज्ञानम् । तत्करणं शब्दः ॥

इति शब्दपरिच्छेदः ।

एवं यथार्थानुभवो निरूपितः ॥

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41. (a) अयथार्थानुभवः त्रिविधः, संशयविपर्ययतर्कभेदात् ॥

(b) एकस्मिन् धर्मिणि विरुद्धनानाधर्मवैशिष्ट्यावगाहि ज्ञानं संशयः—यथा स्थाणुर्वा पुरुषो वा इति ॥

(c) मिथ्याज्ञानं विपर्ययः—यथा शुक्तौ 'इदं रजतम्' इति ॥

(d) व्याप्यारोपेण व्यापकारोपः तर्कः—यथा 'यदि वह्निः न स्यात् तर्हि धूमोऽपि न स्यात्' इति ॥

42. स्मृतिरपि द्विविधा, यथार्था अयथार्था च । प्रमाजन्या यथार्था । अप्रमाजन्या अयथार्था ॥

43. (a) सर्वेषाम् अनुकूलतया वेदनीयं सुखम् ॥

(b) प्रतिकूलतया वेदनीयं दुःखम् ॥

(c) इच्छा कामः ॥

(d) क्रोधो द्वेषः ॥

(b) *Vākyārthajñānaṁ śābdajñānaṁ. Tatkaraṇaṁ śabdaḥ.*

Iti śabdaparicchedaḥ.

Evam yathārthānubhavo nirūpitaḥ.

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41. (a) *Ayathārthānubhavaḥ trividhaḥ, saṁśaya-viparyaya-tarkabhedāt.*

(b) *Ekasmin dharmiṇi viruddhanānādharmavaiśiṣṭyāvagāhijñānaṁ saṁśayaḥ—yathā sthāṇurvā puruṣo vā iti.*

(c) *Mithyājñānaṁ viparyayaḥ—yathā śuktau 'idam rajatam' iti.*

(d) *Vyāpyāropeṇa vyāpakāropaḥ tarkaḥ—yathā 'yadi vahniḥ na syāt tarhi dhūmo'pi na syāt' iti.*

42. *Smṛtirapi dvividhā, yathārthā ayathārthā ca. Pramājanyā yathārthā. Apramājanyā ayathārthā.*

43. (a) *Sarveṣām anukūlatayā vedanīyaṁ sukham.*

(b) *Pratikūlatayā vedanīyaṁ duḥkham.*

(c) *Icchā kāmaḥ.*

(d) *Krodho dveṣaḥ.*

(e) कृतिः प्रयत्नः ।

(f) विहितकर्मजन्यः धर्मः ।

(g) निषिद्धकर्मजन्यस्तु अधर्मः ।

(h) बुद्ध्यादयः अष्टौ आत्ममात्रविशेषगुणाः । बुद्धीच्छाप्रयत्नाः नित्याः अनित्याश्च । नित्याः ईश्वरस्य । अनित्याः जीवस्य ।

(i) संस्कारः त्रिविधः—वेगः, भावना, स्थितस्थापकश्च इति ।

वेगः पृथिव्यादिचतुष्टयमनोवृत्तिः ।

अनुभवजन्या स्मृतिहेतुः भावना आत्ममात्रवृत्तिः

अन्यथाकृतस्य पुनः तादवस्थ्यापादकः स्थितस्थापकः कटादिपृथिवीमात्रवृत्तिः ॥

इति गुणाः ।

44. चलनात्मकं कर्म । ऊर्ध्वदेशसंयोगहेतुः उत्क्षेपणम् । अधोदेशसंयोगहेतुः अवक्षेपणम् । शरीरस्य सन्निकृष्टसंयोगहेतुः आकुञ्चनम् । विप्रकृष्टसंयोगहेतुः प्रसारणम् । अन्यत्सर्वं गमनम् ॥

45. नित्यमेकमनेकानुगतं सामान्यम् । द्रव्यगुणकर्मवृत्ति । परं सत्ता । अपरं द्रव्यत्वादि ॥

(e) *Kṛtiḥ prayatnaḥ.*

(f) *Vihitakarmajanyaḥ dharmaḥ.*

(g) *Niṣiddhakarmajanyastu adharmaḥ.*

(h) *Buddhyādayaḥ aṣṭau ātmamātraviśeṣa-guṇāḥ. Buddhi-icchā-prayatnāḥ nityāḥ anityāśca. Nityāḥ Īśvarasya. Anityāḥ Jīvasya.*

(i) *Saṁskāraḥ trividhaḥ—vegaḥ, bhāvanā, sthitasthāpakaśca iti.*

Vegaḥ pṛthivyādicatuṣṭayamanovṛttiḥ.

Anubhavajanyā smṛtihetuḥ bhāvanā ātmamātra-vṛttiḥ.

Anyathākṛtasya punaḥ tādavasthyāpādakaḥ sthita-sthāpakaḥ kaṭādipṛthivīmātravṛttiḥ.

Iti guṇāḥ.

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44. *Calanātmakaṁ karma. Ūrdhvadeśasaṁyoga-hetuḥ utkṣepaṇam. Adhodeśasaṁyogahetuḥ avakṣe-paṇam. Śarīrasya sannikṛṣṭasaṁyogahetuḥ ākuñcanam. Viprakṛṣṭasaṁyogahetuḥ prasāraṇam. Anyat sarvam gamanam.*

45. *Nityam ekam anekānugatam sāmānyam Dravya-guṇa-karmavṛtti. Param sattā. Aparam dravyatvādi.*

46. नित्यद्रव्यवृत्तयः व्यावर्तकाः विशेषाः ॥

47. नित्यसंबन्धः समवायः, अयुतसिद्धवृत्तिः । ययोः द्वयोः मध्ये एकमविनश्यदवस्थम् अपराश्रितमेवावतिष्ठते तौ अयुतसिद्धौ—यथा अवयवावयविनौ, गुणगुणिनौ, क्रिया-क्रियावन्तौ, जातिव्यक्ती, विशेषनित्यद्रव्ये च इति ॥

48. (a) अनादिः सान्तः प्रागभावः, उत्पत्तेः पूर्वं कार्यस्य ॥

(b) सादिः अनन्तः प्रध्वंसः, उत्पत्त्यनन्तरं कार्यस्य ।

(c) त्रैकालिकसंसर्गावच्छिन्नप्रतियोगिताकः अत्यन्ता-भावः—यथा 'भूतले घटः नास्ति' इति ॥

(d) तादात्म्यसम्बन्धावच्छिन्नप्रतियोगिताकः अन्यो-न्याभावः—यथा 'घटः पटो न' इति ॥

49. सर्वेषां पदार्थानां यथायथम् उक्तेष्वन्तर्भावात् सप्तैव पदार्थाः इति सिद्धम् ॥

50. कणादन्यायमतयोः बालव्युत्पत्तिसिद्धये ।
अन्नम्भट्टेन विदुषा रचितस्तर्कसंग्रहः ॥

इति तर्कसंग्रहः समाप्तः ॥

———

46. *Nityadravyavṛttayaḥ vyāvartakāḥ viśeṣāḥ.*

47. *Nityasaṁbandhaḥ samavāyaḥ, ayutasiddhavṛttiḥ. Yayoḥ dvayoḥ madhye ekamavinaśyadavastham, aparāśritam evāvatiṣṭhate tau ayutasiddhau—yathā avayavāvayavinau, guṇaguṇinau, kriyākriyāvantau, jātivyaktī, viśeṣanityadravye ca iti.*

48. (a) *Anādiḥ sāntaḥ prāgabhāvaḥ, utpatteḥ pūrvam kāryasya.*

(b) *Sādiḥ anantaḥ pradhvaṁsaḥ, utpattyanantaram kāryasya.*

(c) *Traikālikasaṁsargāvacchinnapratiyogitākaḥ atyantābhāvaḥ—yathā 'bhūtale ghaṭaḥ nāsti' iti.*

(d) *Tādātmyasambandhāvacchinnapratiyogitākaḥ anyonyābhāvaḥ—yathā 'ghaṭaḥ paṭo na' iti.*

49. *Sarveṣām padārthānām yathāyatham ukteṣvantarbhāvāt saptaiva padārthāḥ iti siddham.*

50. *Kaṇādanyāyamatayoḥ bālavyutpattisiddhaye*
Annambhaṭṭena viduṣā racitastarkasaṁgrahaḥ||

ITI TARKASAṀGRAHAḤ SAMĀPTAḤ

—:o:—

॥ श्रीः ॥

॥ तर्कसंग्रहः ॥

A PRIMER OF INDIAN LOGIC

PART III

TRANSLATION AND EXPOSITION

CHAPTER I

PERCEPTION

1

T—In my heart, I devoutly cherish the Lord of the universe; my teacher, I respectfully greet; and I proceed to write this Primer of Indian Logic, called *Tarka-Saṁgraha,* with a view to beginners gaining knowledge easily.

Following the time-honoured practice of orthodox Sanskrit writers, Annambhaṭṭa begins his Primer with an appropriate *maṅgala,* which consists, here, in paying devout homage to his God and to his teacher. The expression *Viśveśa*—the Lord of the universe—is suggestive of the central argument of the Nyāya theism—the creationistic argument. The four preambulary factors, constituting what is known as *anubandha-catuṣṭaya,* are also indicated in the second line of the introductory verse. They are subject-matter (*viṣaya*), the chief aim (*prayojana*), relation (*sambandha*) and the persons for whom the work is specially designed (*adhikārin*). Such preambulary details are usually incorporated in modern books in a separate preface prefixed to the work in question, while they are briefly set forth in the opening verses in śāstra treatises in Sanskrit. The elements of the Nyāya-Vāiśeṣika system

in its syncretist form constitute the subject-matter of this Primer and its aim is to enable beginners to understand them easily. It follows from this that this Primer is intended for the beginners. *Pratipādya-pratipādaka-bhāva*—the relation of *treated and treatise*—is generally stated to form the *sambandha* in almost all śāstra works. This would be useless information, when understood literally. It would acquire special significance if it should be interpreted as holding out an assurance, that the author can be trusted to treat well in his treatise, the subject in hand.

The name *Tarka-saṁgraha* is interpreted by Annambhaṭṭa himself as a compendious elucidation of the nature of substance, qualities and such other ontological categories of the Vaiśeṣika system, that are accepted by Nyāya. The term *tarka* is thus taken by the author in a somewhat unusual sense. The usual meanings, however, of the word *tarka* are *logic*, *reasoning*, *reductio ad absurdum* and *discussion*. Putting all these ideas together, it would be easy to see how the title *Tarka-saṁgraha* may be taken to be equivalent to 'A Primer of the Nyāya-Vaiśeṣika system in its syncretist form'.

2

T—Substance, quality, activity, generality, particularity, inherence and non-existence are the seven categories (*padārthāḥ*).

A *padārtha* is literally a nameable or denotable thing or a thing which corresponds to a word. Kaṇāda,

in his Vaiśeṣika-sūtras, gives the name *artha* to substance (*dravya*), quality (*guṇa*) and activity (*karma*). Praśastapāda, the author of the Vaiśeṣika-bhāṣya called *Padārtha-dharma-saṁgraha* enumerates the first six *padārthas* out of the seven mentioned above. Later Vaiśeṣikas add non-existence (*abhāva*) to Praśastapāda's list of six *padārthas*. Gautama, the author of the Nyāya Sūtras, Vātsyāyana, the author of Nyāya-bhāṣya and later Naiyāyikas recognise all these seven *padārthas*.

What is a *padārtha* or category as understood in the above text—2. T.? A *padārtha* is usually defined as a knowable thing (*jñeya*) or as a validly cognisable thing (*prameya*), or as a nameable or denotable thing (*abhidheya*). The Nyāya-Vaiśeṣika system maintains that its scheme of seven *padārthas* represents a satisfactory classification of all the knowable or nameable things. The first six are called *bhāva-padārthas* or existent entities and are thus contrasted, in a marked way, with *abhāva*, which amounts to non-existence. Though Kaṇāda speaks of *abhāva*, he does not include it in his list of *arthas* for the reason that he understands by *artha* an entity in which existence or *sattā*, in the Vaiśeṣika sense, inheres. Praśastapāda does not mention *abhāva* in his scheme of six *padārthas*, since this scheme confines itself to *bhāvas*. But a complete scheme of all the knowable or validly cognisable or nameable things must not omit *abhāva*; for it is maintained in the Nyāya-Vaiśeṣika system that we know *abhāva*, know it correctly and the negative terms in language denote it.

It would be useful to compare in this connection the above scheme of seven *padārthas* with Gautama's scheme of sixteen *padārthas* and with the corresponding schemes adopted in certain other systems of Indian philosophy. In the first Sūtra of the Nyāya-darśana, Gautama enumerates sixteen *padārthas*—means of valid knowledge (*pramāṇa*), objects of valid knowledge (*prameya*), doubt (*saṁśaya*), purpose (*prayojana*), instances (*dṛṣṭānta*), established conclusions (*siddhānta*), members of syllogism (*avayava*), *reductio ad absurdum* (*tarka*), decisive knowledge (*nirṇaya*), arguing for truth (*vāda*), arguing constructively as well as destructively for victory (*jalpa*), merely destructive argument (*vitaṇḍā*), fallacious reasons (*hetvābhāsa*), quibbling (*chala*), specious and unavailing objections (*jāti*), and vulnerable points (*nigrahasthāna*). These sixteen are not metaphysical categories similar to those of the Vaiśeṣikas; but they are merely sixteen topics which one should study in order to master the details of the Nyāya dialectics. The Mīmāṁsakas of the Bhāṭṭa school recognise five *padārthas*—substance, generality, quality, activity and non-existence. The Prābhākaras recognise eight—the five *bhāvas* of the Nyāya-system (omitting viśeṣa) and potency (*śakti*), similarity (*sādṛśya*) and number (*saṅkhyā*), non-existence not being accepted as a distinct category. The Sāṁkhyas accept twoultimate *padārthas*: primordial matter (*prakṛti*) and spirit (*puruṣa*). Among the Vedāntins, the Advaitins maintain that there is one ultimate reality--Brahman and there are only two *padārthas*—spirit (*cit*) and non-spirit (*acit*), or soul (*ātman*) and non-soul

(*anātman*) ; the Viśiṣṭādvaita school recognises three—spirit (*cit*), non-spirit (*acit*), and God (*Īśvara*) ; and the Dvaitins reduce all the *padārthas* to two main categories—independent and dependent. Among the older Vaiśeṣikas, we find some, like the author of the *Daśa-padārtha-śāstra*, who would recognise ten *padārthas* in all—the six *bhāvas* of the later Vaiśeṣikas, potentiality (*śakti*), inability (*a-śakti*), generic differentia (*sāmānya-viśeṣa*) and non-existence (*abhāva*). Except Gautama's list of sixteen *padārthas*, all these schemes of categories attempt, with a large measure of success, at a sound metaphysical classification of all nameable or knowable things; and none of these Indian schemes can justly be said to exhibit the logical defects that we notice in similar schemes of categories known to Western logic such as the somewhat arbitrary scheme of *ten* categories or predicates given by Aristotle, and the schemes of *four* or *three* or *seven* categories put forward by the Stoics, Descartes, Spinoza, Locke, Mill and other philosophers.

In most of the syncretist works dealing with the tenets of the Nyāya-Vaiśeṣika system, the arguments advanced by the Bhāṭṭas as well as the Prābhākaras to establish the existence of potentiality (*śakti*) as a distinct entity (quality or category) and the view upheld by the latter school of Mīmāṁsakas that similarity (*sādṛśya*) should be given a distinct place in the list of categories are refuted. Counter-agents (*pratibandhaka*) counteract the operation of causes and causes turn out to be unavailing. The counteraction that we experience in such

cases cannot be explained otherwise than as consisting in the destruction of the causal efficacy or *śakti* of the causes. Thus according to Mīmāṁsakas, the existence of *śakti* as a distinct category must necessarily be recognised. The Naiyāyikas argue that counteraction consists merely in the presence of counter-agents, the total non-existence of which is one of the elements constituting the full compliment of the causal apparatus (*sāmagrī*). Thus they disprove the necessity for recognising *śakti* as a distinct category. Similarity, according to Prābhākaras, does not consist merely in the possession of parts or qualities or features of the same kind as the Naiyāyikas urge; but it is revealed in experience as a distinct category. The Naiyāyikas contend that a careful analysis of experience would show that similarity consists merely in the possession of parts or qualities or features of the same kind.

3 (a)

T—Of them (the seven categories), the Substances are only nine—*viz.*: earth, water, light, air, ether, time, space, soul and mind.

The word 'only' in this text is intended to exclude 'darkness', which according to Mīmāṁsakas, is a distinct substance. The Mīmāṁsakas argue that on the strength of the experience which associates blue colour and movement with darkness, it should be regarded as a substance; and it cannot be any of the nine substances mentioned above. So, it should be given a distinct

place as the tenth substance in the list of substances. The Naiyāyikas point out that the experience which associates colour and movement with darkness is erroneous. For, a substance having colour can be seen only in the presence of light; and darkness, which is seen in the absence of light, cannot be a substance having colour. In fact, darkness, according to Naiyāyikas, is nothing but the total absence of such light as is effectual in normal perception.

In the text under consideration, substances are divided into nine classes. This may be taken to be a definition of substances from the point of view of extension. But the Nyāya method of exposition, according to Vātsyāyana (Nyāya-Bhāṣya—1-2-3, Avatārikā) recognises that expository scheme to be perfect which consists of *uddeśa* (enumeration accompanied by *vibhāga* or division), *lakṣaṇa* (definition) and *parīkṣā* (investigation). Thus a mere enumeration or division of substances will not do and they should be defined. A substance is usually defined as that which possesses the *jāti* (generic attribute) called *dravyatva* (substance-ness); or as that in which a quality (*guṇa*) or activity (*kriyā*) inheres; or that which is fit to be treated as the inherent cause (*samavāyi-kāraṇa*) of some effect. Of these alternatives, the second and third, based on quality and activity, are not applicable to substances in the first moments of their creation; for, according to the Naiyāyika theory of causation, every cause should necessarily precede its effect, and qualities and activities, which are the effects of sub-

stances, require at least one moment before they could come into being. If the function of definition should be to provide a valid reason (*hetu*) for inferring difference from others and if inference should be of something which is not already comprised in the connotation of the minor term (*pakṣa*), substance-ness (*dravyatva*), which is connoted by the term *dravya*, would not form a satisfactory definition. In such circumstances, by using quality or activity and without directly using *dravyatva*, a substance is defined as a thing possessing a *jāti* (generic attribute), which is not *sattā* (existence) and is co-existent with a quality or activity. This kind of ingenious device, which is commonly adopted by the Naiyāyikas, is known as *jāti-ghaṭita-lakṣaṇa*.

In this connection, it would be of advantage to elucidate briefly the Naiyāyika's view of definitions and their functions. A definition in Nyāya is not merely an explication of the connotation of a term; but it is a proposition specifying the differentia or the differentiating feature of the species or the thing defined. A *lakṣaṇa* is a specific feature or *asādhāraṇa-dharma*. The term *asādhāraṇa* means that which is free from the three faults of a definition—*viz*: over-applicability (*ativyāpti*), partial inapplicability (*avyāpti*) and total inapplicability (*asambhava*). A definition, that is too wide and that consists of an attribute which is present in things sought to be defined as well as those not intended to be defined, has the defect of *ativyāpti*; while a definition which does not

apply to some of the things defined has the defect of *avyāpti*; and one which is wholly inapplicable to any of the things defined has the defect of *asambhava*. Such a specific feature (*asādhāraṇadharma*) is reciprocally co-extensive with the adjunct that delimits the scope of *lakṣyatā* (being sought to be defined); in other words, wherever that feature is, *lakṣyatāvacchedaka* or the delimiting adjunct of *lakṣyatā* is, and wherever the latter is, the former is. In the case of a cow or an ox (*gauḥ*), for instance, *gotva* or bovineness is the *lakṣyatāvacchedaka*, when all the quadrupeds of the bovine species, and none else, are sought to be defined. In this case, brown colour or uncloven hoof would be too narrow to constitute a definition, the former, which is applicable only to some of the *lakṣyas*, being vitiated by the fault of *avyāpti* (partial inapplicability), and the latter, which is applicable to none of them, being vitiated by *asambhava* (total inapplicability), while having horns would be too wide and therefore vitiated by the fault of *ativyāpti*. It will be seen, from this, that the Nyāya view of the function of a definition is primarily, differentiation, and incidentally, designation also, while the latter is the only conceivable function in certain cases. "*Vyāvṛttir vyavahāro vā lakṣaṇasya prayojanam*" is an oft-quoted dictum in Nyāya literature. *Vyāvṛtti* or differentiation consists in the inference of difference from the other things. Smell in the case of earth or rationality in the case of a man forms a differentiating *lakṣaṇa* and serves as a valid reason leading to the inference of difference from *not-earth* in the former case, and from *not-man* in the latter. What

helps in differentiation also helps in specific designation. All *vyāvartakalakṣaṇas* are thus *vyāvahārikalakṣaṇas* also. In certain cases like nameability (*abhidheyatva*), all things (*padārtha*) are intended to be covered by the definition; but no differentiation is possible, as nothing can be said to be other than a *thing* (*padārtha*); and in such cases the only function of *lakṣaṇa* is designation (*vyavahāra*).

It would be interesting to observe here that *lakṣaṇas* or definitions are as important on the positive side in the *pluralistic realism* of the Nyāya-Vaiśeṣika system, as they are on the negative side in the *monistic phenomenalism* of the Advaita Vedānta. In the former system, *lakṣaṇas* are helpful in arriving at, and maintaining the reality of, several self-contained and mutually exclusive units, which, according to the Advaitic monist are but fragmentary appearances of the *one absolute*; while, in the latter system, *lakṣaṇas* are but so many unsustainable stunts demonstrating the futility of the differentiating efforts of the fissiparous phase of human intellect and the soundness of the doctrine of indefinability (*anirvacanīyatā*) which the Advaitins seek to uphold.

It may also be useful to remember here that the conception of substance (*dravya*) as the substratum of qualities and movements is the bed-rock of the realism of Nyāya; and one has only to show the hollowness of the Nyāya distinctions of substance (*dravya*), quality (*guṇa*) and movement (*karman* or *kriyā*), in order to knock off the bottom of the Nyāya realism.

3 (b)

T—Colour, taste, smell, touch, number, size, separateness, conjunction, disjunction, remoteness, proximity, weight, fluidity, viscidity, sound, cognition, pleasure, pain, desire, dislike, volition, merit, demerit, tendency—these are the twenty-four qualities.

Patañjali, in his Mahābhāṣya, describes a *guṇa* as something which inheres only in a substance, and, under certain circumstances, ceases to be there; which is found in different species of substances but eternal in some cases and non-eternal in other cases.

"Sattve niviśate'paiti pṛthagjātiṣu vartate
Ādheyaścākriyājaśca so' sattva'prakṛtirguṇaḥ."

This is Patañjali's definition of a *guṇa*. It is generally adopted by all the grammarians (*Vaiyākaraṇas*) and it amounts to this in plain language: a *guṇa* may be eternal or non-eternal and inheres in a substance; but it is neither a substance nor an activity. The Vaiyākaraṇa's conception of a *guṇa*, for all practical purposes, is the same as the Naiyāyika's conception of it. The Mīmāṁsakas sometimes use the term *guṇa* in the sense of a quality and sometimes in the general sense of something that is ancillary and comparatively unimportant. The term *guṇa* is sometimes used in the sense of literary merit and also in the general sense of a good feature. The Sāṁkhya sense of the word is the com-

ponent strands of the composite primordial matter called *prakṛti* which consists of the three *guṇas*—goodness (*sattva*), passion (*rajas*) and darkness (*tamas*). The Vedāntins generally use the word *guṇa* in the sense of an attribute or *dharma*. Though the term *guṇa* is thus greatly ambiguous in Sanskrit philosophical literature, the Naiyāyika's technical use of this term is sufficiently precise and does not admit of confusion.

It would be difficult to justify the need for giving a distinct place in the Naiyāyika's list of *guṇas*, *to pṛthaktva, vibhāga, paratva* and *aparatva*. *Pṛthaktva* (separateness) is not materially different from *difference* which, according to Naiyāyikas, is *anyonyābhāva* or reciprocal negation—a species of non-existence. *Vibhāga* (disjunction) could hardly be distinguished from *Saṁyoganāśa* (loss of contact). What are remoteness and proximity (*paratva* and *aparatva*) but space-relation or time-relation, the former consisting in a larger number of intervening *saṁyogas* (contacts) or *viprakṛṣṭatva* and the latter in a smaller number of intervening *saṁyogas* or *sannikṛṣṭatva*? In fact, some Navya-Naiyāyikas are prepared to discard these *guṇas*, on the grounds indicated. The realistic obsession of the Nyāya-Vaiśeṣika writers, who often go to the length of finding in the external world an objective reality corresponding to every thought and every word, is mainly responsible for the retention of these qualities in the traditional list of *guṇas*.

It would be useful to note here that the Nyāya system draws a distinction between *viśeṣa-guṇas* and

sāmānya-guṇas. Colour, smell, taste, touch, viscidity, natural fluidity, cognition, pleasure, pain, desire, hatred, effort, merit, demerit, reminiscent impressions and sound—these are *viśeṣa-guṇas*; and the rest are *sāmānya-guṇas*. The former are special qualities, as the name *viśeṣa-guṇa* signifies; and they are special qualities in the sense that they are never found to be common to two classes of substances, or to be more accurate, that a *viśeṣa-guṇa*, in the specific form in which it is actually found, has a *jāti* which is not present in any quality co-existing with two classifying attributes (*vibhājakopādhi*) of substances. It is easy to see how the rest are *sāmānya-guṇas* or general qualities.

3 (c)

T—Activity or motion is of five kinds: upward motion, downward motion, contraction, expansion and going or movement from one place to another.

Kaṇāda's traditional classification of *karma* (activity) is here followed, though the classification is unsatisfactory, as pointed out by Nīlakaṇṭha in his Prakāśikā and by several others. It is obvious that *gamana* in a broad sense would include all other varieties of activity. In common parlance, *karma*, *kriyā* and *kṛti* are used as synonyms. In śāstraic terminology, *kṛti* is equivalent to *yatna*, which is the inner volitional process immediately and invariably preceding a voluntary activity. In this sense *kṛti* should not be confounded with *kriyā* or *karma*. The

Nyāya-Vaiśeṣika system distinguishes between voluntary activity (*yatna-pūrvakakriyā* or, as it is sometimes called, *ceṣṭā*) and involuntary activity (*a-yatna-pūrvaka-kriyā*). The term *karma* used in the sense of *kriyā* should be distinguished from the syntactic *karma* (object); and it should be also differentiated from *karma*, used in the sense of the unseen impression or vestige which every work leaves behind it and which shadows the doer. It is in this latter sense that the word *karma* should be understood in phrases like the 'Karma theory' and '*prārabdha-karma*.'

According to Vaiśeṣikas and Naiyāyikas, the essential feature of every activity is to bring about disjunction (*vibhāga*), then the destruction of conjunction with a previous spot (*pūrvadeśasaṁyoganāśa*) and lastly conjunction with a further spot (*uttaradeśa-saṁyoga*). The origin of a *kriyā* occupies one moment (*kṣaṇa*); and the three factors that follow its origin—separation, loss of prior contact and further contact—occupy each one moment. An activity, thus, fulfils its purpose completely in the fourth moment (*kṣaṇa*), as soon as the further contact (*uttaradeśasaṁyoga*) arises and comes to an end in the fifth *kṣaṇa*. Every activity lasts only for four *kṣaṇas*. An important corollary deducible from these facts is that one *karma* can never *cause* another *karma*; for, an activity cannot be said to be caused in the second or third or fourth *kṣaṇa* of a prior activity, the prior contact being destroyed by the disjunction resulting from the prior activity, the later activity having no purpose to serve in the second or

third or fourth *kṣaṇa* of the prior activity, and the fifth *kṣaṇa* being one in which the prior activity comes to an end and cannot, therefore, be associated with the later activity as its cause. In this connection, it should be remembered that a *kriyā* cannot be conceived of otherwise than as direct and independent cause of disjunction and as leading to further contact, through loss of prior contact; for, according to Kaṇāda and Gautama, to go to is to forego, or, in other words, to quit, to sunder and touch further on. (*Kriyā, tato vibhāgaḥ, tataḥ pūrvadeśasaṁyoganāśaḥ, tataḥ uttaradeśa-saṁyogaḥ, tataḥ kriyānāśaḥ*). It may also be noted here that the Vaiśeṣikas and Naiyāyikas use any one of these five factors, from the origin of *kriyā* down to its cessation, as the delimiting condition (*upādhi*) of a *kṣaṇa*, which is regarded as the smallest unit of time.

The Nyāya-Vaiśeṣika conception of *kriyā* stands in sharp contrast with the Vaiyākaraṇa view of this category. According to the Vaiyākaraṇas a *kriyā* is what is usually denoted by a verbal root (*dhātu*) and it is ordinarily a process consisting of many activities (*vyāpārāḥ*) arising in succession. In its fully accomplished state (*siddhāvasthā*), a *kriyā* is denoted by a substantive like *pāka*; and when it is being done or in its *sādhyāvasthā*, it is denoted by the radical element in a finite or infinitival verb.

It would be worthy of notice here that the Naiyāyikas and the Bhāṭṭa-mīmāṁsakas maintain that a *kriyā* is perceptible and may be visualised under cer-

tain conditions; whereas, the Prābhākaras hold that it falls beyond the scope of the senses and it comes to be known only through inference from further contact preceded by disjunction (*vibhāgapūrvaka-saṁyoga*). It should also be remembered that Indian philosophers, like Śaṅkara, draw pointed attention to the fundamental difference between a *kriyā* and a *jñāna*, which consists in the former being such as directly falls within the scope of the will (*puruṣatantra*) and the latter never coming within the scope of the will but having its nature determined by its object (*vastutantra*).

3 (d)

T—Generality is of two kinds—the more comprehensive and the less comprehensive.

3 (e)

T—Particularities, on the other hand, abide in eternal substances and are innumerable.

3 (f)

T—Whereas, inherence is merely one.

In common speech, *sāmānya* means a common feature; but, in the technical language of Nyāya, it is equivalent to *jāti* and is understood to stand for a generic feature which inheres in all the individuals constituting a class and is eternal. The individual units (*vyakti*) of a class may come and go, but the generic attribute common to the whole class exists for ever.

Humanity, or more literally man-ness (*manuṣyatva*), which is common to all mankind, is eternal and it existed before the origin of man and will continue to exist even after the annihilation of all mankind. A *jāti*, in this technical sense, is connected with a *vyakti* through the intimate relation known as *samavāya* or inherence. An attribute may be common to several individuals and connected with them either through the direct relation of *svarūpa-sambandha*, the related object itself being looked upon as relation, or through some indirect relation (*paramparā-sambandha*); such an attribute is called *upādhi* and should not be confounded with a *jāti*. *Mūrtatva*, for instance, is not a *jāti*; and it amounts to "being the seat of all activity" (*kriyāśrayatva*). It is sometimes called *sakhaṇḍopādhi*—a feature which admits of being defined and stands in need of the help of a definitive expression for its definite comprehension; and in this sense, a *sakhaṇḍopādhi* is said to be *nirvacanīya*. A *jāti* like pot-ness (*ghaṭatva*) is *anirvacanīya*—does not stand in need of the help of a definitive expression for its comprehension. The Naiyāyikas recognise certain generic attributes called *akhaṇḍopādhis*, which are not *jātis* but similar to them in all respects except that the relation of the former to their abodes is self-link (*svarūpa-sambandha*)—the related thing itself constituting its own relation—and that it is not inherence (*samavāya*) as in the case of *jāti*. *Viṣaya* is object; *viṣayatā* is *object-ness*; *viṣayatātva* is *being object-ness* and is an *akhaṇḍopādhi*. *Pratiyogin* is correlative; *pratiyogitā* is correlativeness; *pratiyogitātva* is *being correlativeness* and is an

akhaṇḍopādhi. Under which of the seven categories should an *akhaṇḍopādhi* be brought? In reply to this question, a Naiyāyika would say that it could be brought under *sāmānya*, if that term should be understood to mean all generic attributes—*jātis* and *akhaṇḍopādhis*. Or, if the term *sāmānya* should be restricted to a *jāti*, an *akhaṇḍopādhi* could not be brought under any of the seven categories. It should be remembered in this connection that these two kinds of generic attributes (*jāti* and *akhaṇḍopādhi*) are the only things that are presented in thought, by themselves, without the help or mediation of their attributes (*svarūpatobhāna-yogyāḥ*); and that thought grasps other things only under the aspect of, or only through the mediation of, a qualifying attribute (*kiñcitprakāra-puraskāreṇaiva bhānayogyāḥ*). In Nyāya terminology, a distinction is sometimes made between *akhaṇḍa-āmānya* and *sakhaṇḍa-sāmānya*, the former being a *jāti* directly connected with a *vyakti* and the latter being a generic attribute which is reducible to a *jāti* connected with a *vyakti* through some indirect relation (*paramparāsambandha*). For instance, *kriyātva* (motion-ness) is an *akhaṇḍa-sāmānya*; while *mūrtatva* is a *sakhaṇḍa-sāmānya*, as it is equivalent to *kriyāśrayatva* (possessing an activity), which is a generic attribute common to all the *mūrtas*—earth, water, fire, air and mind, and may be said to consist in the *jāti*—*kriyātva*—being present through the indirect relation—*svasamavāyi-samavāyitva* (being the intimate substratum of its own intimate substratum).

How do the Naiyāyikas show that it is necessary to recognise *sāmānya* or *jāti* as a distinct category? Our experience, in several cases where it relates to diverse objects, exhibits a certain degree of uniformity. When we see a human being or a beast, our experience howsoever it may differ in other respects, invariably takes the form—'this is a man' (*ayam manuṣyaḥ*) or 'this is a beast' (*ayam mṛgaḥ*). The uniformity that we thus observe in our experience cannot be accounted for otherwise than through the assumption of a generic feature common to all mankind or all the beasts. This generic feature is called *manuṣyatva* (humanity) in the case of human beings and *mṛgatva* (beasthood) in the case of beasts. Parsimony in thought is relied upon by the Naiyāyikas as a criterion of soundness, when it does not clash with any other criterion which is stronger or more reliable. The principle of economy or the law of parsimony or the *lāghava-nyāya* determines the nature of many a hypothesis in Nyāya and other systems of Indian thought. According to this principle, a generic feature like *manuṣyatva* or *mṛgatva* should be taken to be eternal, one, and connected with men or beasts through the intimate and eternal relation called *samavāya* (inherence). In one word, it should be taken to be a *jāti* in the technical sense, in the interest of *lāghava*, so long as there is nothing preventing the hypothesis of *jāti* being put forward in the case under consideration. Thus, through perceptual experience, one might arrive at a *jāti*, in order to account for uniformity in such experience. There are several cases in which perceptual experience of a whole class

is impossible or it happens to be restricted to a few and not accessible to all. For instance, in the case of substances (*dravya*), only three of them—earth, water and fire—are perceptible to the external senses, some of their varieties being imperceptible. Though *ātman* (spirit or soul) is perceptible to the inner sense called *manas* (mind), its existence as a *dravya* cannot be taken for granted at the stage at which the *jāti*—*dravyatva* (substanceness) is yet to be established. In such circumstances, the Naiyāyikas maintain the necessity for recognising a *jāti* by means of inference (*anumāna*) aided by the principle of parsimony (*lāghava*). By way of illustration, their argument to establish *dravyatva* may be set forth here. Only a substance can be *samavāyikāraṇa* (intimate cause or inherent cause). Human thought, in respect of causality (*kāraṇatā*) as in other respects, shows a habitual preference for compactness and unity. The conception of *kāraṇatā* could serve some useful purpose in life, only when it takes a definite and comprehensive form; and it cannot take a form which is at once definite and comprehensive, so long as it is not specifically delimited in its scope by a comprehensive and definite adjunct. In other words, a suitable delimiting adjunct of *kāraṇatā* ((*kāraṇatāvacchedaka*), besides a similar delimiting adjunct of *kāryatā or effectness* (*kāryatāvacchedaka*) should be thought of in the case of every comprehensive and definite statement of causal relation (*kārya-kāraṇa-bhāva*). The need for such a statement being taken for granted in the case of the *samavāyi-kāraṇatā* belonging to substances as a class, it follows that this

kāraṇatā is definitely determined in its scope by a delimiting adjunct which is common to all the substances. Such a delimiting adjunct in the case of *samavāyi-kāraṇa* (*samavāyi-kāraṇatāvacchedaka*) is called *dravyatva*. Economy in thought, in the absence of any outweighing disadvantage or difficulty, would necessarily lead to *dravyatva* (substanceness) being assumed to be eternal (*nitya*), one (*eka*) and connected with all the substances through *samavāya*, *i.e.*, a *jāti* in the technical sense. This argument is usually stated in Sanskrit thus:—

> "*Dravyaniṣṭhā samavāyikāraṇatā (guṇam, saṁyogam, vibhāgam vā prati), yatkiñcidanugata-dharmāvacchinnā, kāraṇatātvāt, daṇḍaniṣṭha-ghaṭakāraṇatāvat.*"

Some *jātis* like *dravyatva* (substanceness) are more comprehensive (*para*) as compared with *pṛthivītva* (earthness) and less comprehensive as compared with *sattā* (existence); while *ghaṭatva* (potness) is the least comprehensive (*apara*) of all the *jātis* in the series of *jātis*—*sattā, dravyatva, pṛthivītva, ghaṭatva*. In every series of *jātis*, it will be seen that *sattā* is the most comprehensive *jāti* and is the generic attribute characterising the one *summum genus* recognised in the Nyāya-Vaiśeṣika system, which may be called *sat* and to which Kaṇāda gives the technical name *artha*. Every series of *jātis* ends with its own *antya-jāti*, which characterises its *infima species*. Thus in the Nyāya-Vaiśeṣika system, while there are several *antya-jātis* and diverse *infimoe species*, there is only one higher

jāti, viz., *sattā* and one *summum genus*. *Jātis*, including *sattā*, can inhere only in substances, qualities and activities (*dravya*, *guṇa* and *karma*) and cannot inhere in any other category. The predication, of *sattā* with reference to the remaining positive categories, *sāmānya*, *viśeṣa* and *samavāya*, is explained away by the Naiyāyikas, on the basis of co-inherence, and not on the basis of inherence. Propositions like '*dravyam sat*', '*guṇaḥ san*', '*karma sat*' convey that *sattā* inheres in a *dravya* or *guṇa* or *karma*; whereas the propositions—'*sāmānyam sat*', '*viśeṣāḥ santaḥ*', '*samavāyaḥ san*'—should be interpreted as referring to the co-inherence of *sāmānya*, *viśeṣa* and *samavāya* with *sattā* in the same place.

In his Sūtra, "*Sāmānyam viśeṣa iti buddhyapekṣam*" (ch. I-āh-2-sū 3), Kaṇāda observes that 'generality and speciality are dependent upon the nature of the view-point'. Some modern writers on Indian logic, more especially some writers in English, are misled by this Sūtra into the belief that Kaṇāda was in favour of a conceptualist view of *sāmānya* and would reduce it to a conceptual factor existing only in thought. This misapprehension results from an imperfect knowledge of Kaṇāda's position. Kaṇāda maintains, partly in an explicit way and implicitly in part, that *jātis* are eternal universals, existing outside the sphere of thought in the same sense in which other realities exist; and that a *jāti* is looked upon as a generic feature (*sāmānya*) or a specific differentia (*viśeṣa*), according as it is conceived of as a unifying or differentiating factor. For

instance, substanceness (*dravyatva*) is a *sāmānya*, when it is looked upon as a generic feature common to all the substances; but it is a *viśeṣa* when it is looked upon as the differentia of substances, by means of which they are distinguished from other things like qualities and activities. One could clearly see how solicitous Kaṇāda really is to establish the reality of *jātis*, from the significant way in which he uses the phrase *antya-viśeṣa* to designate the distinct category known as *viśeṣaḥ*, so that they may not be confounded with *jātis* looked upon as differentia.

To philosophise, according to the exponents of the Nyāya-Vaiśeṣika system, is to unify, wherever possible, through universals arrived at on the basis of observed similarities or uniformities, and to ramify and differentiate, wherever fidelity to experience requires it, through differentiating features arrived at from observed dissimilarities. This process, in the direction of generalisation, has led to several *jātis* being recognised, and in the direction of differentiation, has resulted in the hypothesis that a unique, self-differentiated and everlasting feature called 'particularity' (*viśeṣa*) should be attributed to every everlasting substance that could not be otherwise distinguished from similar everlasting substances. Composite substances like a jar or a cloth, made of component parts, can easily be distinguished from each other by means of the different parts constituting them. Eternal substances, which are alike in respect of *guṇa*, *karma* and *jāti*, like the eternal atoms of earth, water, fire or air, cannot be

distinguished from similar substances of the same class without ascribing to them some unique feature called *viśeṣa.* In our perceptual experience, one thing is differentiated from another thing through a distinguishing feature. As a matter of fact, in the super-normal perceptual experience (*alaukika-pratyakṣa*) of seers and Yogins, one atom of earth is distinguished from another atom of earth; in such cases, there must be a differentiating feature; no *guṇa, karma* or *jāti* can be relied upon as a distinguishing feature, for in those respects, all atoms of earth are alike; even the super-normal perception of a Yogin cannot change the fundamental nature of things (*vastu-svabhāva*) and cannot see a man as a beast or a horse as an ass; it is the fundamental nature of perception, both normal and super-normal, that it distinguishes one object from another through a distinguishing feature; and thus, the perception of one atom of earth as distinct from another atom of the same kind, super-normal as it happens to be, should be accounted for by ascribing to each atom of earth a unique feature called *viśeṣa.* By following the same line of argument, it would be necessary to ascribe a *viśeṣa* to each of the atoms constituting producible substances (*janya-dravya*).

These *viśeṣas* should be taken to be self-discriminating (*svatovyāvartaka*) or self-differentiated (*svato vyāvṛtta*). If a *viśeṣa* were to be differentiated from another *viśeṣa* or from any other object through some distinctive feature other than *itself* or its own *svarūpa,* it would lead to an endless

assumption of distinctive features and this line of thought cannot be sound as it is vitiated by *anavasthā* or endless regression. It follows necessarily that each *viśeṣa* stands isolated and unique; and *ex hypothesi*, even a *jāti* called *viśeṣatva*, common to all the *viśeṣas*, becomes inadmissible for the reason that a *viśeṣa* would cease to be self-descriminating were it to be associated with a *jāti*, every *jātī*—including *sattā*—turning out to be a differentia in cases of contrast with things devoid of that *jāti*.

All the Vaiśeṣikas and Naiyāyikas agree that each atom should be taken to have a unique *viśeṣa* inherent in it, that the relation between a *viśeṣa* and its abode is inherence (*samavāya*) and that *viśeṣas* are eternal. There is, however, some difference of opinion as to whether every eternal substance should be taken to have a *viśeṣa*. It is necessary that each *jīva* (individual soul) and each *manas* should be assumed to ha e a unique *viśeṣa*; for, though, when a *jīva* is in a state of bondage (*baddha*), he and his mind could be shown to have distinctive features in the form of distinctive experiences and such other characteristics, yet neither a liberated (*mukta*) *jīva* nor his mind could be differentiated from other liberated *jīvas* and their minds, without ascribing to each of them a unique *viśeṣa*; and there can be no difference of opinion about this matter among the Naiyāyikas. With regard to ether (*ākāśa*), while some Naiyāyikas hold that a *viśeṣa* should be ascribed to it as the delimiting determinant of its causality of sound (*śabda-sāmavāyikāraṇatāvacchedaka*),

others hold this is unnecessary. In the case of spatial direction (*dik*) and time (*kāla*), if they are recognised to be distinct substances, they should be taken to have distinctive *viśeṣas*; but, while the earlier **Naiyāyikas** recognise *dik* and *kāla* to be eternal substances, distinct from others, the later Naiyāyikas, like *Raghunātha Śiromaṇi*, would bring *dik* and *kāla* under God (*Īśvara*), uncommon attributes like eternal omniscience being quite adequate to distinguish God from the rest without the help of a *viśeṣa* of His own. It should be remembered in this connection that, when the term *viśeṣa* is taken in its usual sense of *differentia*, the phrase *antya-viśeṣa* is used to describe the unique category known as *viśeṣa*, it being said to be *antya* for the reason that it stands at the end of all differentiating features, or for the reason that it inheres in eternal substances which transcend creation and destruction and are, therefore, denoted by the word *anta*.

When two substances come into contact with each other, their relation is called *saṁyoga*; and this relation is not of an intimate character and is separable. There is another type of relation which determines determinate cognitions of objects as associated with certain attributes (*viśiṣṭa-pratīti*); and this relation when it happens to connect two things of which one, as long as it does not become moribund or cease to exist, is always associated with the other—two things which are technically called *ayuta-siddha*—is known as *samavāya*. This is an intimate type of relation recognised as subsisting between component parts and composite wholes

(*avayava* and *avayavin*), qualities and substances (*guṇa* and *dravya*), movements and moving substances (*kriyā* and *dravya*), generic attributes and the individuals forming a class (*jāti* and *vyakti*), and particularities and eternal substances (*viśeṣa* and *nityadravya*). The intimate relation of *samavāya* stands in marked contrast with contact (*saṁyoga*) which is not an indissoluble relation and is easily lost. With some effort the Naiyāyikas distinguish *samavāya* from another type of relation recognised by them, which is known as *svarūpa-sambandha* or self-relation and which consists in one of the related things being looked upon as comprising a relational phase forming a connecting link. For instance, time-relation (*kālika-sambandha*) is time (*kāla*) itself looked upon as a connecting link between time and things limited in time. Numerous varieties of *svarūpa-sambandha* are recognised by the Naiyāyikas in all cases where cognition of an object with its adjunct (*viśiṣṭa-pratīti*), the configuration of which involves three cognised factors—an adjunct (*viśeṣaṇa*), an object qualified by it (*viśeṣya*) and their relation, has to be accounted for through some relation and where that relation cannot be contact or inherence (*saṁyoga* or *samavāya*). The conception of *svarūpa-sambandha* is pressed into service too much by the Naiyāyikas and is pushed too far in their view regarding the relation of *tādātmya* (complete identity), which forms the relation underlying cognitions like this—'a jar exists in itself'. It is maintained by the Naiyāyikas that, though a relation ordinarily implies difference,

the relation of identity should be considered an exception and cannot be ignored since it is presented in valid experience.

The Nyāya conception of *jāti* may, with advantage, be compared with the views held by the Vaiyākaraṇas (Grammarians), Bhāṭṭas, Prābhākaras, Bauddhas and Advaitins on this subject. The term *jāti*, according to Indian Grammarians, primarily denotes class-attributes in the Nyāya sense; and terms denoting caste, lineage and followers of a Vedic school are also treated as terms denoting a *jāti* for purposes of the application of certain grammatical rules framed with reference to terms denoting *jāti* (*jātivāci*). The Bhāṭṭa-mīmāṁsakas hold that a *jāti* like cowness (*gotva*), horseness (*aśvatva*) is eternal, omnipresent and perceptible; that, though present everywhere, it is manifested only in and through the individual objects comprising a class and that such objects are called *vyaktis* chiefly for the reason that they serve to manifest *jāti*; and that their relation to *vyaktis* is not inherence (*samavāya*) but relative identity or identity compatible with difference (*tādātmya*). The relation of *tādātmya*, according to the Bhāṭṭas, is not absolute identity, as the Naiyāyikas take it to be; but it is identity in a relative sense—*i.e.* identity (*abheda*) compatible with difference (*bheda-sahiṣṇu*). Though difference and identity are ordinarily opposed to each other, yet they are taken by the Bhāṭṭas to be compatible with each other, on the ground that it is experience, after all, that determines the compatibility or incompatibility of two

things and that experience warrants the recognition of difference, associated with identity, as forming the relation between *jāti* and *vyakti*. In the proposition—'this is a horse' (*ayam aśvaḥ*), for instance, 'this' refers to a particular *vyakti* and 'horse', according to the Bhāṭṭas, primarily refers to horseness (*aśvatva*), which is a *jāti*. According to this view, in the judgment embodied in this proposition, a *jāti* is equated with a *vyakti*. But this equation cannot be absolute as, in that case, the two words 'this' and 'horse' would turn out to be synonyms. Therefore, the Bhāṭṭas argue that, on the strength of what is presented in cognition, a peculiar relation consisting in difference-cum-identity (*bhedābhedau*), should be recognised in the case of *jāti* and *vyakti*. While Naiyāyikas restrict *jātis* to the first three categories—substances, qualities and activities, the Bhāṭṭas ascribe the highest or the most comprehensive *jāti* called existence (*sattā*) to those three categories and also to the fourth category, generality (*sāmānya*). The Prābhākaras, on the other hand, contend that a *jāti* or generic attribute can be recognised only in perceptible substances, and any common attribute which cannot be perceived alike by the learned and illiterate in *vyaktis* should not be regarded as a *jāti*. It would follow from this that cowness (*gotva*) and such other attributes may be regarded as *jātis*, while existence (*sattā*), substanceness (*dravyatva*), and such other attributes are not *jātis*. According to these philosophers, the relation between a *jāti* and *vyakti* is inherence (*samavāya*), as in the Nyāya system, the re-

lation of *tādātmya* consisting in difference-cum-identity being discarded as an impossible jumble.

The Buddhistic idealists would reduce all *jātis* to the negative form of 'difference from the rest' (*svetarabheda*), cowness (*gotva*), for instance, being no more than difference from things other than a cow (*gavetarabheda*). They ridicule the Nyāya doctrine of *jāti* in this strain:—"Eternal cowness, dogness, assness, and such other *jātis*—where do they exist, after all the cows, dogs and asses cease to exist at the time of universal dissolution (*pralaya*)? Do they exist in God? To say so would be blasphemy. When a dog or an ass or a cow dies, does its *jāti* leave it? It cannot do so, for the reason that only substances can move. When a cow is just born, how does it come to have *cowness*? It cannot be said that cowness is produced in a new-born calf, for *jāti* is eternal and has no origin. Nor can it be said that a *jāti* loses some of its parts when a *vyakti* ceases to exist, and acquires additional parts as new *vyaktis* are produced; for eternal *jātis* can have no parts. Indeed, in your doctrine of *jāti*, you have brought a hornet's nest to your ears." The Advaitic monists of the *post-Śaṅkara* and *pre-Śaṅkara* stages in the history of Indian monism cleverly use the Nyāya theory of *jāti* to their profit, by showing that the highest *jāti*, existence (*sattā*), is the grand generality (*mahāsāmānya*), which represents the only absolute reality called *Brahman*, and that the various *vyaktis* and smaller *jātis* like *gotva* and *aśvatva*

are but appearances super-imposed upon the absolute *sattā*.

Inherence (*samavāya*) is recognised by Prābhākaras in cases where two inseparable things (*ayutasiddha*) are intimately connected with each other; but it is taken to be eternal in cases where both the related objects are eternal, and non-eternal in other cases. It is the obsession of economy (*lāghava*) that has led the Naiyāyikas to hold that inherence is eternal and one. In the place of *samavāya*, the Bhāṭṭas and Advaitins recognize the relation of difference-cum-identity (*tādātmya*). *Viśeṣas*, in the sense in which the Vaiśeṣikas and Naiyāyikas recognize them, are not recognized by other Indian philosophers, who find it easy to disprove the necessity for recognizing *viśeṣas* by pointing out that the self-discriminating capacity ascribed to *viśeṣas* might be attributed, with advantage, to eternal substances themselves.

In order to completely understand the Nyāya doctrine of *jāti*, it is necessary to pay some attention to the principles which Udayanācārya, one of the greatest exponents of Nyāya in the tenth century, laid down for determining which of the numerous common attributes presented in one's experience should be treated as *jātis* and which should not be. These principles are six:—(1) the individuals in question being only one (*vyaktyabheda*); (2) the individuals in question being the same—neither more nor less (*tulyatva*); (3) attributes which exclude each other in some places being found together elsewhere (*saṁkara*); (4) endless regression

(*anavasthā*); (5) giving up the distinctive feature made out *ex hypothesi* (*rūpahāni*); and (6) the absence of the necessary relation (*asambandha*). In his Kiraṇāvalī, Udayana sums up these six principles in this verse:—

"*Vyakterabhedastulyatvam saṁkaro'thānavasthitiḥ;*
Rūpahānirasambandho jātibādhakasaṁgrahaḥ."

Etherness (*ākāśatva*) cannot be a *jāti*, for the obvious reason that, according to Naiyāyikas, ether is eternal and one and that there is no question of forming a class consisting of several similar individuals. There can be no distinction between jarness and potness (*kalaśatva* and *ghaṭatva*), as the jars or pots, which form the class in view and to which the generic attribute in question is ascribed, happen to be the same. Senseness (*indriyatva*) co-exists with elementness (*bhūtatva*) in the external senses like the visual sense constituted by fire; *indriyatva* is dissociated from *bhūtatva* in the mind (*manas*), which is not a *bhūta*; *bhūtatva* alone exists in a jar, which is made of earth and not a sense; the only possible relations that are warranted by experience, between two attributes recognised to be *jātis*, are inclusiveness and mutual exclusiveness; for instance the sphere of *dravyatva* includes that of *ghaṭatva*, while *ghaṭatva* and *paṭatva* (jarness and clothness) are mutually exclusive; so, neither *indriyatva* nor *bhūtatva* can be regarded as a *jāti*, on the ground of unwarranted blend (*sāṁkarya*). If all the *jātis* were to be supposed as having a *jāti* common to them there would be endless regression in this way.

Suppose the *jātis* we start with are three—*a*, *b* and *c*; if we assume that these three *jātis* have a *jāti* common to them called *x*, the total number of *jātis* would become four—*a*, *b*, *c* and *x*; and having committed ourselves to the position that there should be a *jāti* common to all *jātis*, the meaning of the word *all* will increase at every step by one more *jāti* being added to the list and we should go on assuming an endless series of *jātis* common to all *jātis*, like x, x^1, x^2, x^3. Thus, on the ground of endless regression (*anavasthā*), a *jāti* called *jātitva*, common to *all jātis*, cannot be recognized. To say that *viśeṣatva* is a *jāti* common to all the *viśeṣas* would be fatal to the distinctive feature of self-differentiation (*svato-vyāvartakatva*), which is ascribed *ex-hypothesi* to *viśeṣas*. The hypothesis of *antya-viśeṣas* (ultimate particularities) is put forward for differentiating eternal substances which could not be otherwise differentiated. If the *antya-viśeṣas* were to have a *jāti*—*viśeṣatva* common to them, they would cease to be *self-differentiating*; for in the case of objects having *jātis* fit to be treated as differentiæ, it is a well-established habit of thought to rely upon such generic differentiæ for purposes of differentiation and not upon the things themselves that have to be differentiated. Thus *viśeṣatva* cannot be treated as a *jāti*, since it would jeopardise the distinctive feature of *viśeṣas*—*svato-vyāvartakatva* and thus involve *rūpahāni*. Negation-ness (*abhāvatva*) is a feature common to all the varieties of non-existence (*abhāva*); but this common feature cannot be regarded as a *jāti*, for the reason that there is difficulty in recognizing the relation of inherence (*samavāya*) as a link

serving to make *abhāva* the substratum of any attribute or the attribute of any substratum. In cases like this, the *jātibādhaka* is called *asambandha*, the required relation of inherence being impossible.

Sāmānya and *viśeṣa* may appropriately be described as the two poles of the pluralistic realism of the Nyāya-Vaiśeṣika system. *Sattā*, the highest *sāmānya*, to which the Naiyāyikas rise with a true philosophic instinct, is not allowed to exhibit itself in its full glory as the all-comprehending absolute reality. Between the two poles of *sāmānya* and *viśeṣa*, the pluralistic universe of Nyāya is sought to be fitted to a threefold scheme of external relations—contact (*saṁyoga*), self-linking relation (*svarūpa-sambandha*) and inherence (*samavāya*)—a scheme which, with the eternal and intimate relation of *samavāya*, turns out to be the Procrustean bed of Nyāya thought. The Nyāya doctrines of *sāmānya*, *viśeṣa* and *samavāya* exhibit fatal weaknesses. If uniformity of experience should necessitate the assumption of *sāmānya* and if the principle of parsimony (*lāghava*) should lead to a *sāmānya* being taken to be eternal, strict consistency in thought would necessarily result in one absolute all-comprehending reality in the shape of *sattā* being recognized and thus the Advaitic monist would find it easy to demolish the pluralistic realism of Nyāya. If *antya-viśeṣas* should be taken to be self-discriminating to avoid *anavasthā*, why should not the self-discriminating capacity, ascribed to them, be attributed to such eternal substances as could not be otherwise distinguished and thus save the Nyāya thought from the cumbersome

doctrine of *viśeṣas*? The Nyāya philosopher, who takes *samavāya* to be eternal and one and yet seeks to avoid inherence of colour (*rūpa-samavāya*) being absurdly jumbled together with the inherence of touch (*sparśa-samavāya*) in air, which is a colourless substance, is only swallowing a camel but straining at a gnat, when he refuses to accept the relation of relative identity (*tādātmya=bhedābhedau*) in the place of inherence on the ground that *bheda* and *abheda* are incompatible.

3 (g)

T—Non-existence is of four kinds:—antecedent non-existence, annihilative non-existence, absolute non-existence and mutual non-existence.

In rendering the term *abhāva*, the two terms non-existence and negation are commonly used. Of these two, the former term is nearer to the Sanskrit word *abhāva*; and the latter term is likely to prove somewhat misleading, as it primarily refers to negative expression rather than to the negative category denoted by such expression. In the previous section, it was pointed out that *abhāvatva* could not be treated as a *jāti*. Some Naiyāyikas take *abhāvatva* to be an *akhaṇḍopādhi*, while others describe it as consisting in the negation of *sattā* (existence) through the relation of inherence (*samavāya*) as well as its negation through co-inherence (*ekārtha-samavāya*). *Abhāva* is defined as a thing which neither has *samavāya* nor is *samavāya*.

Things which are yet to be produced are referred to as non-existent prior to their production. When threads are ready and a cloth awaits production, it is said "Here, a cloth will come into being" (*atra paṭo bhaviṣyati*). Such expressions conveying the non-existence of a product prior to its creation should be relied upon as evidence of antecedent non-existence (*prāgabhāva*). According to the Naiyāyikas, every producible object (*kārya*) is invariably preceded by its own antecedent non-existence (*prāgabhāva*), which is also regarded as a necessary part of the causal machinery required for producing an effect. This forms an important element in the creationistic theory of causation upheld by the Naiyāyikas. They maintain that a *prāgabhāva* has no beginning but comes to an end at the moment of the creation of its counter-correlative (*pratiyogin*)—which is the product in question; that its abode is invariably the intimate or material cause (*samavāyi-kāraṇa*); that it is destroyed by the complete causal apparatus which immediately produces the effect in question; and that it is usually referred to by an expression which, though affirmative in form, conveys an implied negation—such as "Here the jar *will* come into being" (*atra ghaṭo bhaviṣyati*). The Nyāya theory of creationism (*ārambha-vāda*) is as inseparably bound up with the view that what is destroyed is annihilated completely and can never arise again, as, on the other side, with the view that what is created is produced for the first time and never existed before. Every created *bhāva* (positive entity) is, therefore, hemmed in between two kinds of non-existence, ante-

cedent and annihilative (*prāgabhāva* and *dhvaṁsa*). *Pradhvaṁsa* is thus produced; and it can never come to an end, since the end of *dhvaṁsa* would mean the regeneration of what is once annihilated—which, according to Naiyāyikas, is impossible. *Dhvaṁsa*, like *prāgabhāva*, abides in the intimate or inherent cause of what is destroyed and it is presented in experiences, such as 'the jar is annihilated' and 'the annihilation of the jar is produced' (*'ghaṭo dhvastaḥ'*, *'ghaṭadhvaṁṣo jātaḥ'*). Some Naiyāyikas of the Nuddea school, like Raghunātha Śiromaṇi, hold that, though it is clearly necessary to recognize *dhvaṁsa* on the strength of certain experiences common to all, it cannot be said that *prāgabhāva* is supported by any such experience and antecedent negation may well be explained as no more than complete non-existence (*atyantābhāva*) viewed particularly in association with the time preceding the creation of the effect in question. The earlier school of Nyāya, however, argues that, if the prior non-existence of a cloth (*paṭa-prāgabhāva*) were not recognized as a special type of non-existence, having no beginning but coming to an end at the moment at which the cloth comes into being, the absurd result that the same cloth is produced again and again in an endless series of successive moments (*paṭadhārāpatti*) would follow; and that, if the prior non-existence of a cloth be recognized as a special type of non-existence forming one of the factors constituting the causal apparatus of the cloth, no such absurd result would follow, one of the causes of the cloth, *viz.* its own *prāgabhāva*, ceasing to exist at the first moment of the creation of

the cloth. 'On this spot there is no jar' (*atra bhūtale ghaṭo nāsti*)—expressions like this, and experiences corresponding to, and embodied in them, refer to a certain type of non-existence which is not restricted to the past, present or future but has reference to all time. In this respect, this variety of *abhāva* stands out in sharp contrast to the two varieties, already mentioned—*prāgabhāva* and *dhvaṁsa* and is called *atyantābhāva*, absolute non-existence, its presence being entirely independent of its counter-correlative (*pratiyogin*) being produced or destroyed. Absolute non-existence (*atyantābhāva*) is eternal and the pluralistic universe of Nyāya is wide enough to accommodate innumerable such *atyantābhāvas*.

The concept of *abhāva* is complex and involves several factors. In order to encompass completely an *abhāva* in thought, one has to think of it in association with five factors—*viz*., counter-correlative (*pratiyogin*), correlated substratum (*anuyogin*), the determining adjunct of the former which delimits the scope of counter-correlativeness (*pratiyogitāvacchedakadharma*), the adjunct delimiting the scope of the substratumness (*anuyogitā*), and the relation which determines the counter-correlativeness of an object (*pratiyogitāvacchedakasambandha*). Taking a specific instance of *atyantābhāva*, such as is embodied in the proposition—'On this spot there is no jar' (*atra bhūtale ghaṭo nāsti*), these five factors may be illustrated. What is intended to be denied, or that object the non-existence of which is referred to here, is not a particular jar

but the whole class of jars. What is sought to be conveyed is that no jar is present here, not even a single jar. In this case, jar, in general, is the *pratiyogin* and the sphere of its *pratiyogitā* is delimited by jarness (*ghaṭatva*), *i.e.*—it is found wherever jarness is found or in every jar. In other words, in this case jarness (*ghaṭatva*) is said to be the *pratiyogitāvacchedakadharma*. A reference to the non-existence of an object amounts to a denial of its existence. When one thinks of the existence of an object, one has to think of its presence in a certain place through some relation. This relation which is intended to be brought within the scope of the denial kept in view is known as the relation determining the *pratiyogitā* (*pratiyogitāvacchedakasambandha*). In other words, it is the relation through which the counter-correlative is intended to be conceived of as present, in the particular place, if it were present there. The intended relation may vary in different cases. In the case of the *abhāva* referred to in the proposition 'There is no jar in contact with this place' (*atra saṁyogena ghaṭo nāsti*), the relation kept in view as determining the presence of the object denied (*pratiyogitāvacchedakasambandha*) is contact (*saṁyoga*). On the other hand, in the case of the *abhāva* referred to in the proposition—'There is no jar inherent in this place' (*atra samavāyena ghaṭo nāsti*), inherence (*samavāya*) constitutes such a relation. The former of these two propositions may be true where the non-existence of a jar is predicated as present in the component part of a jar (*kapāla*);

while in that case the latter proposition would not be true. For a *kapāla* may not have any jar in contact with it; but a *kapāla* must have inherent in it the jar of which it is a component part. The place in which the non-existence of an object is said to be present is *anuyogin* and its adjunct which delimits the scope of the substratumness (*anuyogitā*) is called the *anuyogitāvacchedakadharma*. A specific reference to this is necessary. To say 'there is no jar on the earth,' is altogether different. In the former case, *this-spotness* (*etadbhūtalatva*) is the *anuyogitāvacchedakadharma*; and in the latter case it is earthness (*bhūtalatva*)—a feature common to the whole of this world. For the reason that the cognition of *abhāva* is so complex as to comprise these five factors, it is placed on a par with a cognition of an object associated with an adjunct (*viśiṣṭabuddhi*), the *abhāva* itself being treated as the chief object (*viśeṣya*) and the remaining factors set forth above being regarded as adjuncts (*viśeṣaṇa*). In the case of *prāgabhāvas* and *dhvaṁsas* also, to know them definitely would be to cognise them in association with these five factors, the containing correlative or correlated substratum (*anuyogin*) of these two varieties of *abhāva* being the respective inherent cause (*samavāyi-kāraṇa*) and the relation determining their *pratiyogitā* being inherence (*samavāya*). These three *abhāvas*—*prāgabhāva*, *dhvaṁsa* and *atyantābhāva*—are otherwise known as *saṁsarga-abhāva*, varieties of non-existence, the *pratiyogitā* of which is delimited by some relation other than complete identity (*tādātmya*). Mutual negation or differen-

tiative non-existence (*anyonyābhāva=bheda*) amounts to difference; and it is a variety of non-existence, the *pratiyogitā* of which is determined by identity (*tādātmya=aikya*). 'A jar is not a cloth' (*ghaṭaḥ paṭo na*) —in propositions like this, difference (*anyonyābhāva*, mutual non-existence) is referred to. In this case, the presence of a jar in a cloth, or of a cloth in a jar, through the relation of complete identity, is denied; or, for all practical purposes, the identity of the two objects referred to is denied. It should be borne in mind that *tādātmya*, in the Nyāya sense, is absolute identity and that *tādātmya*, in the Bhāṭṭa sense, is relative identity or difference-cum-identity. The variety of *abhāva* is eternal in the case of eternal objects and non-eternal in other cases. Some old Naiyāyikas speak of a certain type of *abhāva* called *sāmayikābhāva*, which, according to them, is a temporary variety of non-existence cognized, for instance, in the place from which a jar is removed for a time and to which it is re-introduced afterwards. But the general sense of the Naiyāyikas is in favour of equating *sāmayikābhāva* with ever-lasting *atyantābhāva*, which may be cognized for a time and may not be presented in certain forms of thought, owing to the absence of the relation determining the prerence of *abhāva* in a certain place. In the case of an *abhāva*, the relation which determines its presence in a certain place, or its being contained (*ādheya*) in a container (*adhikaraṇa*) is known as *vaiśiṣṭya*. This is but a variety of self-linking relation (*svarūpa-sambandha*) and consists in the particular container itself viewed in asso-

ciation with the particular moment at which the counter-correlative in question (*pratiyogin*) is not present on that spot; in other words, the *particular* container, *as such*, constitutes the *vaiśiṣṭya*.

It is noteworthy here that, according to the Naiyāyikas of the older school, total non-existence is never cognised in the substratum of antecedent or annihilative non-existence. (*Dhvaṁsaprāgabhāvādhikaraṇe atyantābhāvo nāṅgīkriyate*). This is not accepted by the later Naiyāyikas. Some Naiyāyikas hold that the delimiting adjunct of *pratiyogitā*, in the case of an *atyantābhāva*, may be an attribute which never belongs to the particular *pratiyogin*. For instance, in the proposition—'A jar does not exist as determined by clothness' (*ghaṭaḥ paṭatvena nāsti*)—*jar* is the *pratiyogin* and clothness (*paṭatva*) is the *pratiyogitāvacchedaka-dharma*. This type of *atyantābhāva* is known as *vyadhikaraṇadharmāvacchinnapratiyogitākābhāva* — a form of non-existence whose counter-correlativeness is determined by a delimiting adjunct which is never co-existent with what is delimited by it. This form of non-existence is omnipresent (*kevalānvayi*) and is co-existent even with its own *pratiyogin*—which is not ordinarily possible. Several later Naiyāyikas reject this view and explain cases like '*ghaṭaḥ paṭatvena nāsti*', by taking the total non-existence of clothness (*paṭatvātyantābhāva*) to be referred to. Advanced students of Advaita would be able to see how the theory of 'non-existence delimited by an incompatible adjunct' (*vyadhikaraṇadharmāvacchinnapratiyogitākā-*

bhāva) turns out to be a treacherous device which Advaitins could conveniently use in proving the unreality of the world.

There is much divergence among the different schools of Indian philosophy in this matter. A student of Nyāya should be able to contrast the Nyāya view of *abhāva* with the views of the Bhāṭṭas and Prābhākaras about *abhāva*. Like the Naiyāyikas the Bhāṭṭas also hold that *abhāva* is a distinct category. The latter maintain that every reality has a positive side consisting of positive attributes, and a negative side represented by non-existence (*abhāva*). Thus *abhāva* is an attribute of reality—a *bhāvadharma* or *vastudharma*. According to the Bhāṭṭas, *abhāva* is cognised by a special instrument of cognition, which is called non-cognition (*anupalabdhi*) and which consists in the non-cognition of an object when all the conditions necessary for its cognition are present. In the Bhāṭṭa scheme of *pramāṇas* (instruments of valid cognition), *anupalabdhi* is given the sixth place and it is known as the *ṣaṣṭhapramāṇa* and it is itself sometimes called *abhāva*. The term *abhāva* used in the sense of *anupalabdhi*, should not be confounded with the *abhāva* which is the object of this *pramāṇa* (*premeya*). The Naiyāyikas, on the other hand, consider that *abhāva* is known through one or the other, as the case may be, of the *pramāṇas* recognized by them. In fact, of the four *pramāṇas* recognized by them—*viz.*: *pratyakṣa* (perception), *anumāna* (inference), *upamāna* (comparison) and *śabda* (verbal

testimony)—*abhāva* may come within the scope of the first, second or the fourth, as the case may be. The Naiyāyikas contend that non-cognition, or strictly speaking, effectual non-cognition (*yogyānupalabdhi*), serves as a necessary accessory to *pratyakṣa*, in cognizing *abhāva*. In the case of a *saṁsargābhāva*, it can be perceived only when its *pratiyogin* happens to be perceptible; while in the case of *anyonyābhāva*, it can be perceived only when its *anuyogin* is perceptible. For instance, one would be able to perceive the non-existence of a jar on a certain spot, but not the non-existence of air in a place; whereas, one could perceive the difference from ether (*ākāśa-bheda*) in a jar. The Naiyāyikas further explain that the effectuality (*yogyatā*) of non-cognition (*anupalabdhi*) when it helps a *pramāṇa* in cognizing *abhāva*, consists in there being no cognition when all the conditions required for it are present.

The Prābhākaras refute the theories that *abhāva* is a distinct category and that *anupalabdhi* is a distinct *pramāṇa*. They contend that the basis of negative propositions is the mere container (*kevalādhikaraṇa*). For instance, in the proposition "Here, on this spot, there is no jar", the only thing which, in fact, is referred to is the empty floor (*kevala-bhūtala*). If *abhāva* should thus be equated with the empty container (*kevalādhikaraṇa*), it might easily be argued from the opposite camp that this is an evasive trick of the Prābhākaras which could be easily seen through and that the concept of the 'emptiness of the container' inevitably presupposes non-existence. The *Prābhākaras*,

however, meet this difficulty by explaining that the phrase 'empty container' is only a description of the form of the cognition underlying negative statements and that *abhāva*, strictly speaking, is the cognition of the container, and of nothing else, in such circumstances as would necessarily lead to the missing object (*pratiyogin*) being cognized, were it present. One of the greatest Prābhākaras—Śālikanātha—describes *abhāva* thus in the Prakaraṇapañcikā:—"*Abhāva* is the cognition of that (container) alone, when the *pratiyogin* (the thing denied in negative statements) ought to have been perceived were it present" (*dṛśye pratiyogini yā tadekaviṣayā buddhiḥ sā tadabhāvo vyapadiśyate*). This view shows a clear idealistic leaning. The weak spot in this theory is that it fails to account adequately for the specific reference to *pratiyogin* in negative propositions, since it would be fatal to the Prābhākara view to connect the cognitions underlying them with anything other than the container and it has to be necessarily said that emptiness is not presented as an adjunct in such cognitions.

In order to avoid needless complications and also endless regression in some cases, *abhāvābhāva* is equated by the Naiyāyikas with the corresponding *bhāva* (positive entity), on the ground that a denial of the non-existence of a thing amounts to an affirmation of the corresponding positive entity. Where one *abhāva* is said to be present in another *abhāva*, some Naiyāyikas equate the contained *abhāva* with the other *abhāva* which represents the containing substratum (*adhikaraṇa*). It would be useful to note here that

difference from a certain object is reciprocally co-extensive with the absolute negation of the differentia of that object. Difference from a jar (*ghaṭabheda*) is mutually co-extensive with the absolute non-existence of jarness (*ghaṭatvātyantābhāva*).

Abhāva is one of the realities recognized by the Naiyāyikas. In a sense, it might be said that it is the reality of the greatest moment in the pluralistic universe of Nyāya. Final emancipation (*mukti* or *apavarga*) is the highest aim of spiritual life in Nyāya as well as in other systems of Indian philosophy. In Nyāya, *mukti* consists in the annihilation of all evils (*duḥkhas*), the term *duḥkha* in this context comprising everything connected with voluntary activity and leading directly or indirectly to the cycle of death and birth (*pretyabhāva*) and including in this manner every form of pleasure (*sukha*). In the language of Nyāya, *mukti* is *ātyantikaduḥkhadhvaṁsa*. It would be a mistake to suppose that the Naiyāyikas are pessimists. In fact, no system of Indian philosophy can be said to be pessimistic; for pessimism, in a strict sense, affords no hope or solace, but every system of Indian philosophy aims at the attainment of what it believes to be the highest good and expects its adherents to find comfort in the *summum bonum* it offers to them. One can easily see why Naiyāyikas attach so much importance to *abhāva*, having due regard to its close relation to the Nyāya conception of *mukti*.

At this stage, it would be useful to consider the Nyāya conception of *sambandha* (relation), with parti-

cular reference to the Nyāya theory of difference (*anyonyābhāva*). The Naiyāyikas maintain that relation always presupposes difference and that difference invariably involves total exclusion of identity. According to this view of *sambandha*, it may be said that relation in the Nyāya system is wholly *external*, and in no case *internal*. Bearing this in mind, one cannot easily understand the rationale of the way in which the Nyāya realists bring relations under different categories —contact (*saṁyoga*) being brought under quality (*guṇa*), inherence (*samavāya*) representing a distinct category, and self-relation (*svarūpa-sambandha*) being reducible to the form of one or the other of the seven categories, as the case may be. The Naiyāyikas hold that not only the simples which unite into complex wholes, but the complex wholes also, exist as independent entities and that neither the simples nor the wholes, when they happen to be the relata of some relation, lose their independence. In Western philosophical literature those relations are said to be *external* which bring the relata together without unifying them, and *internal* relations are said to be rooted in the very nature of things and serve to transform and to unify, though in varying degrees. In Indian philosophy, the relation of difference-cum-identity (*tādātmya*) is essentially an *internal relation*, according to the Sāṁkhya, Bhāṭṭa and Advaita systems. In these systems, where difference is not wholly incompatible with identity, where causation is not new creation, but transformation to some extent, and where all relations may be said to involve difference and identity in some sense and no relation

can be recognised in cases of absolute difference, it can be easily seen that no relation is strictly external and nothing which does not unify, in some sense, can be considered a relation. In the Nyāya-Vaiśeṣika system, difference is uncompromising and amounts to a total negation of *tādātmya* in the sense of complete identity; it is an external reality and not a mere conceptual product; it is presupposed by every relation, and every relation is thus *external*. It may be asked whether complete identity (*atyantābheda* = *tādātmya*), which is treated as a *sambandha* by the Naiyāyikas in all cases where a thing is equated with itself, is also an *external* relation. To this question, a Naiyāyika would reply that nothing can be said to be rooted in the nature of a thing, in view of the fact that an attribute (*dharma*) is wholly different from a qualified thing (*dharmin*), a composite whole (*avayavin*) is totally different from its component parts (*avayava*), *jāti* is totally different from *vyaki*, and that in all cases of relation, the relata, as such are different from each other. Even in cases where complete identity (*aikya* = *tādātmya*) is recognized to serve as relation, though the relation amounts to a negation of difference (*bhedābhāva*), yet there would be no inconsistency in recognizing difference between the relata as such; for, where a jar is conceived of as existing in a jar through the relation of identity, what is denied is the difference between a jar and itself, as determined by jarness (*ghaṭatva*), the difference presupposed by the *sambandha*, in that case, having reference to the relata as such—*i.e.* as determined by relatedness (*sambandhitva*). The opponents of Nyāya

realism point out that the conception of relation, which is based upon uncompromising difference incompatible with identity, is unsustainable, in as much as the fundamental function of every relation is to unify, in however small a measure it may be, and for the reason that it would be absurd to speak of any relation of proximity or distance between entirely different things such as Madras and Monday or Vārāṇasī and Friday. A Naiyāyika would meet this kind of objection by saying that the fundamental function of relation is to bring together and not to unify—*to glue* and not *to weld* or *solder* or *fuse*, and that any two things can be brought together or glued together through a relation. With an unyielding pertinacity, the Nyāya realism clings to the conception of uncompromising difference and seeks to represent that all relations must be taken to be *external*. Nevertheless the philosophical integrity of Nyāya thought pulls in the opposite direction and inevitably leads to compromises with the philosophical systems recognising *internal* relations; and such compromises are to be found in *saṁyoga*—the most prominent type of external relation which is possible only between independent substances (*dravya*) —being regarded as a quality (*guṇa*) which, along with the related elements (*saṁyukta*) where it inheres, forms pairs of *inseparables* (*ayutasiddha*); in *samavāya* being regarded as an intimate relation and in the somewhat clumsy efforts made to save its externality by making it eternal and one and by letting it survive its relata in several cases; and in the very conception of self-rela-

tion (*svarūpa-sambandha*), more especially in the conception of complete identity (*abheda*) as a variety of self-relation. These compromises are indeed the weak spots in the walls of the realistic fortress of Nyāya, at which the opponents of Nyāya, like the Bhāṭṭas and Advaitins, find it easy to effect convenient breaches.

4

T—Of them, earth is that which has smell. It is of two kinds—eternal and non-eternal. Its eternal variety consists of atoms. Its non-eternal variety consists of its products. Again, it is of three kinds—the three varieties being the body (*śarīra*), the sense (*indriya*) and other objects (*viṣaya*). The earthen body is the body that belongs to the beings of our class. The earthen sense is the olfactory sense by which one perceives smell; and that sense finds its abode in the tip of the nose. The earthen objects (*viṣaya*) are clay, stones and such other things.

5

T—Water is that which has cold touch. It is of two kinds—eternal and non-eternal. The

eternal variety consists of atoms. The non-eternal variety consists of its products. Again, it is of three kinds—the three varieties being the body, the sense and other objects. The body made of water is found in the world of the Water-God. The sense made of water is the gustatory sense by which one perceives taste; and that sense resides in the tip of the tongue. The objects made of water are rivers, ocean and such others.

6

T—Fire is that which has hot touch. It is of two kinds—eternal and non-eternal. Its eternal variety consists of atoms. Its non-eternal variety consists of its products. Again, it is of three kinds—the three varieties being the body, the sense, and other objects. The body made of fire is in the world of Sun. The sense made of fire is the visual sense by which one perceives colour; and that sense resides in the foremost part of the dark pupil of the eye. The objects

made of fire are of four kinds, the four varieties being the light of the earth, that of the sky, that of the stomach and that of the mine. The common fire which people use and its varieties belong to the earth. Lightning and such other varieties, with water as fuel, belong to the sky. The gastric variety is what digests the food. Gold and such other lustrous metals form the variety which is dug out of a mine.

7

T—The air is that which has touch but no colour. It is of two kinds—eternal and non-eternal. Its eternal variety consists of atoms. Its non-eternal variety consists of its products. Again, it is of three kinds – the three varieties being the body, the sense and other objects. The body made of air is found in the world of the Wind-God. The sense made of air is the tactus by which one perceives touch; and that sense is found all over the body. The object made of air is the air that shakes trees

and such other things. The air that moves about within the body is the vital air, which, though one in itself, is called differently as *prāṇa*, *apāna*, etc., according as its abodes in the body differ.

8

T—Ether is that which has sound as its quality. That is one, all-pervasive and eternal.

In the texts given above, the first five substances are defined and classified. These definitions, with the required amplification, are faultless, according to the requirements of what a Naiyāyika would consider a valid definition. In these five definitions, the relation connecting the respective qualities with the respective substances is inherence (*samavāya*). In order to make the first four definitions quite accurate so as to cover cases of earth, water, fire and air in the first moments of their creation (*utpatti-kṣaṇa*), the device of *jātighaṭitalakṣaṇa*, already referred to on page 10 *supra*, is adopted. In the definition of ether (*ākāśa*), the word quality (*guṇa*) is intended to indicate that sound is the only *viśeṣaguṇa* of this substance. In the Nyāya system, as in the other systems of Indian philosophy, the five substances—earth, water, fire, air and ether—are said to be the five elemental beings (*bhūta*). The Naiyāyikas define a *bhūta* as a substance having a special quality which may be perceived by one or th

other of the external senses (*bahirindriyagrāhya-viśeṣaguṇavat*); and the *bhūtas* are contrasted with what are called *mūrtas* in Nyāya. There are five *mūrta* substances—earth, water, fire, air and mind (*manas*). A *mūrta* is a moving substance (*kriyā-śraya*).

In the case of earth, water, fire and air, two varieties are spoken of—the eternal and the non-eternal. The eternal variety in each case is said to be represented by atoms (*paramāṇu*). This leads to a consideration of the atomic hypothesis of the Nyāya-Vaiśeṣika system. This hypothesis is closely connected with the Nyāya-Vaiśeṣika theory of causation and it forms the pivotal part of the Nyāya-Vaiśeṣika cosmogony. Though it had its origin mainly in the speculative thought of Nyāya metaphysics, it exercised a profound influence over many a doctrine of the pluralistic realism of Nyāya and it is in no sense less worthy of consideration than the corresponding atomism which, till recently, swayed scientific thought in the Western world, until it came to be replaced by the theory reducing every atom to a miniature solar system consisting of numerous small electrons gyrating round a sun in the centre. The course of speculative reasoning which led the exponents of the Nyāya-Vaiśeṣika system to formulate the atomic hypothesis should receive due attention here. All visible substances are composite structures consisting of component parts joined together and are large, *i.e.* have the size (*parimāṇa*) called largeness (*mahattva*). Largeness (*mahattva*) and

smallness (*aṇutva*) are the two main varieties of size recognized by the Naiyāyikas and they vary between two extreme limits, the highest and the lowest. The highest limit of *mahattva* is called *paramamahattva* and is ascribed to all-pervasive substances (*vibhudravya*). The lowest limit of *mahattva* belongs to the smallest visible substance—say a mote floating in a sunbeam, one of the conditions of visual preception being association with the size, *mahattva*, to the minimum degree at least. The highest limit of smallness (*aṇutva*) is the smallest conceivable size (*aṇutamatva=pārimāṇḍalya*), which is attributed to atoms (*paramāṇu*). Even the smallest visible substance is a composite structure consisting of component parts (*sāvayava*), because it is a visible substance (*cākṣuṣadravya*). We know this from our observation of the nature of visible substances like a jar. We know also from our observation of the nature of the component parts of visible substances that such parts produce discrete wholes possessing *mahattva* (largeness) and are themselves discrete wholes consisting of distinct parts. In other words, from our observation, we arrive at the generalisation—whichever forms a part of a large substance (*mahadārambhaka*) is itself a discrete whole made up of parts (*sāvayava*). So, even the constituent part of the smallest visible substance—say the smallest mote seen floating in a sunbeam is a discrete whole made up of parts (*sāvayava*). An endless assumption of parts would involve the defect of endless regression (*anavasthā*), which is generally regarded in Indian philosophy as a fatal objection to

the recognition of causal relation or to explanation. It would, therefore, be necessary that the process of division should stop at some point and the point at which it stops is the last conceivable part (*avayava*). It would be most reasonable to recognize that as the last conceivable part, beyond which no kind of argument constrains us to recognize further parts. Beyond the parts constituting the component elements of the smallest visible motes, there is no necessity to recognise further parts, the reason constraining the recognition of parts in the smallest visible substances being that the latter are visible and, likewise, the recognition of parts in the constituents of the smallest visible substances being that those constituents cause a composite whole which is large (*mahadārambhaka*), and there being no such compelling reason in the case of the component parts of such constituents, since those parts are neither visible nor members of a large substance. The whole argument is usually stated thus in the form of two syllogisms in Sanskrit:—

> "*Jālasūryamarīcistham yat sūkṣmatamam dṛśyate tat sāvayavam, cākṣuṣadravyatvāt, ghaṭavat. Tadavayavo'pi sāvayavaḥ, mahadārambhakatvāt, kapālavat.*"

The smallest visible substance forming the minor term (*pakṣa*) in the first of these two syllogisms is called *truṭi* or *trasareṇu* and is regarded as a triad or ternary product. Its component part forming the minor term (*pakṣa*) of the second syllogism is called *aṇu* or *dvyaṇuka*, which is a dyad or binary product. The smallest conceivable unit forming a dyad is called an

atom (*paramāṇu*). The component part of a *truṭi* is not visible and does not possess even the minimum *mahattva* (largeness); and it is, therefore, said to be a minute part (*aṇu*). This minute part forms a member (*avayava*) of the smallest visible substance called *truṭi* which has the minimum *mahattva*; and it is thus *mahadārambhaka* and, for that reason, consists of parts. The parts of each component element in a *truṭi* must be at least two and need not be more than two and they are therefore taken to be *two*; and these two parts are the smallest conceivable units which are taken to be the smallest *ultimates* not admitting of further sub-division and are called *atoms* (*paramāṇus*). It is now apparent why each component element of a *truṭi* is called a dyad (*dvyaṇuka*=a binary product of atoms). For obvious reasons the component elements of a *truṭi* itself cannot be less than two; and they are taken to be *three* in the Nyāya-Vaiśeṣika system. In other words, a *truṭi* or *trasareṇu* is made up of three dyads (*dvyaṇuka*). For this reason, it is also called *tryaṇuka*. The reason why the number of parts in a *truṭi* is fixed at *three* requires explanation. In our experience, we see that the size (*parimāṇa*) of the parts gives rise invariably to an increased size of the same kind in the composite whole and that this increase is only an increase in degree. Our observation is restricted to substances having *mahattva* (largeness). This observation leads to the generalisation that, if a size should serve as the non-intimate cause (*asamavāyikāraṇa*) of another size, both of them, the size that causes and the size that is caused, belong to the same variety of size, and the size

that is caused represents a higher type of the same variety, as compared with the size that causes. (*Parimāṇānāṁ svasajātīyasvotkṛṣṭaparimāṇārambhakatva-niyamaḥ*). A strict application of this rule to *aṇutva* would make it clear that, if the *aṇutva* (smallness) of atoms (*paramāṇu*) or dyads (*dvyaṇuka*) were to be taken as the non-intimate cause (*asamavāyikāraṇa*) of dyads or triads (*tryaṇuka*), the size of the dyads and triads should represent a higher degree of smallness (*aṇutaratva*). This is an obviously absurd result, for the reason that *tryaṇuka* must necessarily have the minimum *mahattva* at least, since it is the smallest *visible* substance. So, from the scope of the rule set forth above, the sizes of dyads and triads should be taken away; and this is done by assuming that, in the case of dyads and triads, the size of the composite product (*avayavin*) is caused, not by the size of the component parts but by their *number* (*saṁkhyā*). In such circumstances, unless the number of the component parts of a dyad differs from that of the component parts of a triad, the difference between a triad and a dyad in respect of size cannot be accounted for. The size of a triad is *mahattva*; the size of a dyad is *aṇutva*; the number that causes *mahattva* must be larger than *two*, which is the number causing the *aṇutva* of the *dyads*. The simplest thing to do here is to assume the next higher integer—*three*—as the number of the component parts of a triad. Those who closely follow the Nyāya-Vaiśeṣika tradition hold that, in the atomic theory, there is clear justification for some restriction regarding the nature and number of the com-

ponent parts in the case of dyads and triads and there is no necessity for recognising any such restriction in the case of composite products (*avayavins*) beyond the stage of triads. It is maintained that the parts of a triad (*tryaṇuka*) are composite structures (*sāvayava*), and they cannot be less than three and need not be more than three and therefore must be *three* in number. The constituent elements of the composite products beyond the stage of triads may be four dyads or five dyads and so on, or four triads or five triads and so on, according to the varying circumstances in each case.

It should also be borne in mind that atoms and dyads are never presented in normal perception and that they are capable of combining with each other. In the atomic theory of the Nyāya-Vaiśeṣika system, it is assumed that the fiat of the omnipotent God, in conjunction with the inevitable vestiges of the works done by embodied souls (*jīvāḥ*), causes *concretive* activities of various kinds in various atoms; and as a result of such activities, they come into contact with each other and composite products in the shape of dyads, triads, and so on, arise. Thus creation (*sṛṣṭi*) takes place. The Nyāya theory of dissolution involves what would appear to be an unnatural assumption. Disintegration or dissolution (*pralaya*) begins not from the top, but from the root—not in the whole, but in the parts. The fiat of the omnipotent God, again, in the absence of any demand for creation on behalf of *jīvas*, causes *descretive* activities of various kinds in atoms, with the result that the contacts (*saṁyogāḥ*)

by which two atoms are held together in dyads are destroyed and all the composite products, beginning from dyads, crumble to pieces.

The opponents of the atomic hypothesis of the Nyāya-Vaiśeṣika system draw pointed attention to its weak points. In the first place, it is difficult to determine which is the smallest visible substance. The motes in the sunbeam are not all of a uniform size. What happens to be the smallest visible substance to the naked eye would not be such to the visual sense aided by a powerful microscope. Even to the naked eye, the smallest visible substance would not be the same, as visual power varies in different individuals. In cases where the size of a composite product is the effect of the size of its component parts, each component part is a composite product. Where, however, the size of the composite product is regarded as resulting from the number of its component parts, one may very well stop with the members of the smallest visible substance and take these members to be two in number. The arguments of *anavasthā* and *lāghava*, if pushed a bit further, would knock off dyads and atoms and would lead to the smallest visible substances themselves being regarded as the indivisible ultimates of composite matter. Further, how can atoms come together? How can contact (*saṁyoga*) arise between two atoms? In our experience, contact (*saṁyoga*) is possible ordinarily between two composite substances (*sāvayava*) or, in some cases, between one composite substance and another all-pervasive substance (*vibhudravya*). Con-

tact is by its very nature spatially non-pervasive (*avyāpyavṛtti*); if it is present in one part of a thing it is missing in another part of the same thing; and it can never be said to completely pervade its relata. Such being the case, it is hardly conceivable how an indivisible atom can come into contact with another atom. These are the more important defects in the atomic theory and pointed out by anti-creationistic philosophers like the Advaitins, the Sāṁkhyas and the Mīmāṁsakas.

A disingenuous attempt is made by some writer to ascribe the origin of the atomic theory of Kaṇāda and Gautama to Hellenic influence. Luckily and justly, that attempt has failed. In the first place, it has to be remembered that, though Kaṇāda might have been the earliest complete and systematic exponent of the atomic theory, he cannot be said to be its discoverer and it might have been one of the floating theories of the pre-Kaṇāda period of Indian thought. Further a comparison of Kaṇāda's atomic theory with Greek atomism would show that the divergences between them are more numerous and striking than similarities. In fact, the only noteworthy similarity between the Indian and Greek theories is that both consider atoms imperceptible. On the contrary, the Greek conception of atoms recognizes quantitative differences in them and totally dissociates them from qualities; while, in the Nyāya-Vaiśeṣika system, atoms are of uniform size, their size representing the extreme limit of minuteness called *pārimāṇḍalya* or *paramāṇuparimāṇa*, and they have

qualities, which are non-eternal in the case of colour, taste, smell and touch in the atoms of earth, and eternal in other cases. Another important difference is that the integration of atoms according to the Nyāya theory is the result of the deliberate design of the omnipotent and omniscient God; while atoms in the Greek theory are wholly subject to chance drifts and aggregations of various types. Professor Keith and those who agree with him are at liberty to think that these divergences, however fundamental they may be, need not be taken to shut out all possibility of Greek influence. It must, however, be remembered that any suspicion of Greek influence has to rest almost entirely on the slender basis of temporal proximity or synchronism and that even this flimsy ground is shattered by the evidences in the early philosophical literature of India in favour of the view that atomic theory might have gained currency in India, in some form, perhaps long before the age of Kaṇāda and Gautama.

The first three of the five elements (*bhūta*)—earth, water and fire—are defined through their characteristic qualities; and the fourth element, air, is defined through the quality of touch in association with the negative adjunct of colourlessness (*rūpābhāva*). The eternal varieties are represented by the atoms whose nature is described above. In the textual sections relating to earth, water, fire and air, the threefold classification, which follows the twofold classification into eternal and non-eternal, divides each of these substances again into body (*śarīra*), sense-organ (*indriya*) and object (*viṣaya*). *Śarīra* (body), in

Nyāya, is the field within whose bounds, the soul (*ātman*) has its experiences (*bhogāyatanam*); or it is *antyāvayavī* or a composite whole which never forms the component part of another composite whole and it serves as the seat of voluntary activity. In the Nyāya-Vaiśeṣika system, a body is constituted wholly by earth, water, fire or air; and it is not made up of five elements (*pāñcabhautika*) as admitted in the *Sāṁkhya* and *Vedānta* systems. A body made of earth, for instance, is constituted entirely by earth which forms its material cause (*samavāyikāraṇa*), the remaining elements forming merely supportive (*upaṣṭambhaka*), not constitutive (*samavāyi*), factors. This is the case also in the bodies made of water, fire and air. The belief that these three varieties of bodies (*jalīyaśarīra, taijasa-śarīra, vāyavīyaśarīra*) are *ultramundane* existences and are found in the worlds of *Varuṇa, Āditya* and *Vāyu* is based on Purāṇic cosmology and does not require any discussion here. A sense-organ (*indriya*) is defined in Nyāya as the seat of such contact with *manas* as causes a cognition, there being in it no special quality which shows (*udbhūtaviśeṣaguṇa*), except sound (*śabda*). The Sanskrit definition of a sense-organ runs thus:—"*Śabdetarodbhūtaviśeṣaguṇānāśrayatve sati jñānakāraṇamanassaṁyogāśrayatvam indriyatvam.*" It may be noted here that perceptible qualities like colour, touch, etc., may be present in a substance either in a condition in which it *shows* (*udbhūtāvasthā*) or in a sub-perceptional condition in which it does not show (*anudbhūtāvasthā*). Colour in the former condition, for instance, is visible and

actually visualised when all the circumstances necessary for visual perception are present and it is present in all visible substances; while, colour in a sub-perceptional condition (*anudbhūtāvasthā*) though not inherently invisible, is never actually visualised. The term *viṣaya* in the threefold classification of earth, water, fire and air turns out to be somewhat misleading in the case of some people. Professor Keith, for instance, takes this term to mean 'an object of sense-perception' and accuses Annambhaṭṭa of inadvertence for having brought atoms under *viṣaya*. It will be seen that there is no inadvertence on the part of Annambhaṭṭa though some of his readers may lose sight of certain matters in their bumptious presumption. The term *viṣaya* here means object of cognition (*jñānaviṣaya*); and in the classification of earth, etc., what is referred to is 'a variety of earth which is neither body (*śarīra*) nor sense-organ (*indriya*)'. In other words though *śarīra* and *indriya* are also *viṣaya* in the sense of object, it is obvious that, in the classification referred to in the text, they are not intended to be denoted by the term *viṣaya*. Intelligent students of philosophy would not find it difficult to appreciate the ontological and epistemological significance of this threefold classification. The knowing souls (*jīvāḥ*) form the fulcra of the pluralistic universe of the Nyāya realist, in whose philosophical setting all the things would fall most naturally into three groups—the cognitional group comprising various forms of cognition, their instruments and their field (*bhogāyatana*), the group of knowing souls, and the objective group comprising

cognised objects. The Nyāya realist would thus like to fancy the universe as a bunch of three distinct flowers fastened together by some kind of external relation; while monistic philosophers would feel sorry that the pluralism of Nyāya mistakes an integral three-petalled flower for a motley cluster.

In the textual section dealing with fire (*tejas*), gold and such other valuable metals are said to come under the mine-born (*ākaraja*) variety of fire. Through speculative reasoning, the Naiyāyikas seek to maintain that gold is light. The yellow metal that we see and handle has some weight. Yellow colour belongs to earth and weightiness to earth and water. So, the metal which has these two properties—yellow colour and weightiness, should be taken to be a variety of earth. However, the yellow and weighty substance that we see and handle and commonly regard as gold cannot all be earth; for, however much you may heat it, it does not completely lose its fluidity (*dravatva*), and any variety of earth, which preserves its fluidity under heat, does so only when it is associated with a substance which is not earth and has fluidity and is capable of counteracting the effect of heat on fluidity. This may be seen in certain varieties of earth, like ghee, placed in water. Thus the yellow substance referred to, though it is itself a variety of earth, should be taken to preserve its fluidity for the reason that it is associated with some other substance which is not earth and has fluidity and counteracts the destruction of fluidity by heat. The latter substance which counteracts and which has occasional fluidity (*naimittika-*

dravatva) cannot be brought under water characterised by natural fluidity (*sāṁsiddhikadravatva*); nor can it be brought under any of the colourless substances, since it has colour. So, the counteracting substance associated with the yellow lump of earth should be a variety of fire or light (*tejas*). This reasoning has got merely an antiquarian interest and rests upon premises involving pre-scientific notions about solidity and fluidity. Even the old-world physical science of India, as known to ancient Āyurvedic writers, would not accept the assumption that gold never loses its fluidity.

With regard to air, there is some difference of opinion between the earlier and later Naiyāyikas about its perceptibility. The former hold that air is inferred as the substratum of touch which is neither hot nor cold. The latter maintain that air is perceived by the sense of touch. Though it is the same throughout, it comes to have different names as *prāṇa*, *apāna*, *vyāna*, *udāna* and *samāna*, when it passes through the body, the heart, the anus, the whole body, the throat and the navel. These five aspects of the air are known as the vital airs.

The senses of sight, taste, smell and touch are respectively constituted by light (*tejas*), water (*jala*), earth (*pṛthivī*) and air (*vāyu*). They are all large enough (*mahat*), the senses of sight, taste and smell (*cakṣus*, *rasana* and *ghrāṇa*) being triads of the respective elements (*bhūta*) and the sense of touch (*tvak*) spreading all over the body. Though they are large enough, they fall outside the range of external sense-

perception, for the reason that their qualities are sub-perceptional (*anudbhūta*), or to be more accurate, for the reason that they are not associated with perceptible colour (*udbhūtarūpa*).

Ether (*Ākāśa*) is inferred as the eternal and all-pervasive substratum in which sound inheres. According to the Sāṁkhyas and Advaitins, it is an element produced and destroyed in the same way as other elements. In Nyāya, the sense of hearing is represented by ether delimited by the orifice of the ear. Ether is all-pervasive (*vibhu*) in the sense that it comes into contact with all the movable (*mūrta*) substances of finite size (*paricchinnaparimāṇa*). An all-pervasive substance does not admit of any movement and is one and eternal, divisibilty and non-eternity being incompatible with all-pervasiveness. The sense of hearing is equated with space (*dik*=spatial direction) by the Mīmāṁsakas. It should be remembered that the term *ether* is the nearest approximation to *ākāśa* as understood in Nyāya and that the function of serving as the medium of light and heat, which modern science ascribes so ether, does not belong to *ākāśa*.

9

T—Time is the (distinctive) cause of expressions involving the terms *past*, etc. It is one, all-pervasive and eternal.

10

T—Direction (in space) is the distinctive cause of expres-

sions involving the terms *east*, etc. It is one, all-pervasive and eternal.

The above definitions of time and space, or direction in space, indicate in simple and clear language, the way in which the exponents of the Nyāya-Vaiśeṣika realism arrive at the two substances known as *kāla* and *dik*. One of the firmest convictions of the Nyāya realist is that there are objective realities exactly corresponding to the elements constituting the subjective form of every valid experience (*anubhava*) and that propositions and expressions recognised to be correct should be relied upon as the unmistakable indexes of the forms of experience which they are intended to express. The Naiyāyikas argue that events are referred to as past, present or future, anterior or posterior, simultaneous or occurring in succession, slow or quick, and that such references cannot be accounted for except by the hypothesis that there is a distinct substance (*dravya*) known as *kāla* (time). 'Now the jar is' (*idānīm ghaṭaḥ*)—such propositions are understood by the Naiyāyikas as referring to some relation between the jar and the sun's motion, on the basis of the old-world astronomical theory that the sun moves on the sky without ever coming to rest. The Naiyāyikas believe that the sun's motion can be ascertained through perception as well as inference. The common-sense view of men connects the concept of *now* (*idānīm*) with the sun's motion (*sūryaparispanda*), brought into relation with the thing denoted by the word collocated with *idānīm* in expressions like '*idānīm ghaṭaḥ*'. The

sun's motion is directly related only with the sun, such direct relation being inherence (*samavāya*) in this case. A jar can be connected with the sun's motion only through some indirect relation. The principle of economy (*lāghava*) makes it necessary that the simplest conceivable relation of an indirect nature should be thought of as connecting the sun's motion with a jar. The simplest form of indirect relation that may be conceived of in this case is 'contact with the thing which is in contact with the intimate substratum of the motion in question—*viz.*, the sun' (*svasamavāyisaṁyuktasaṁyoga*). In this chain of indirect relation the two extreme ends are the two relata—*viz.*, motion on the one side and jar on the other. The sun is the intimate substratum of the motion (*svasamavāyī*); the thing in direct contact with it is not the jar, as we know, but something else; and that *something* should be taken to be in contact with the jar. The relation of contact being possible only in the case of two substances, the *something*, which forms the intermediate link between *kriyāsamavāyin* (the sun) on the one side and contact with the jar (*ghaṭasaṁyoga*) on the other, must be a substance (*dravya*). This substance is called time (*kāla*).

How are we to know that this intermediate substance that bridges over the gulf between the sun and a jar, is one, eternal and all-pervasive, and does not come under any of the other substances? It is presented in every experience or expression, explicitly or implicitly, as substratum of other objects; it is not perceptible, nor has it the qualities of colour, touch and

sound; so, it must be different from the five *bhūtas*; it would be reasonable to suppose that it is of infinite magnitude (*paramamahattva*), since it is taken to be one and eternal for the sake of economy (*lāghava*); and in view of the distinct cognitions we have of the past, present and future, as compared with the east, west, north and south, we should take time (*kāla*) to be different from space (*dik*). In a similar manner space (*dik*) is also inferred by the Naiyāyikas as the substratum of the contact which serves as the non-inherent (*asamavāyī*) cause of spatial proximity and distance (*aparatva* and *paratva*), referred to in statements like 'This lies farther', 'This lies near'. Both time and space (*kāla* and *dik*) are imperceptible according to the Naiyāyikas and are all-pervading substances in which all the things in the Universe may be said to be present through the self-relation of time or space (*kālikasambandha* or *daiśikasambandha*). While *time* or *space* taken by itself (*mahākāla* or *akhaṇḍadik*) is regarded as the containing substratum (*adhikaraṇa*) of every thing in the world, eternal or non-eternal, only non-eternal objects, among the rest, may be regarded as container (*adhikaraṇa*) of other objects through time-relation (*kālikasambandha*). This is embodied in the oft-quoted dictum of Nyāya—"*nityeṣu kālikāyogaḥ.*"

Any producible thing may serve as the conditioning adjunct of *mahākāla* (the immense and indivisible time), and anything of limited size as the conditioning adjunct of *akhaṇḍadeśa* (the immense and indivisible space). The Naiyāyikas say—"*Janyamātram*

kālopādhiḥ, mūrtamātram digupādhiḥ." Though time and space are indivisible and all-pervasive, temporal and spatial divisions are conceived of through association with delimiting adjuncts in the form of some producible thing (*janya*) or of something limited in size (*mūrta*). In this way, divisions of time to a moment (*kṣaṇa*) downward and divisions of space are arrived at.

The Vaiyākaraṇa philosophers speak of time and space as modifications of the subtle sound (*śabdatanmātra*), which is a substance (*dravya*) according to them. The Buddhist idealists regard time and space as merely forms of momentary and fleeting consciousness (*vijñāna*). The Advaitic monists look upon time and space as phenomenal appearances super-imposed upon the absolute *Brahman*, which is the only reality transcending them. The Sāṁkhyas would bring both time and space under the elemental evolute (*bhūta*) called *ākāśa*. Modern Naiyāyikas like *Raghunātha Śiromaṇi* bring time and space under God (*Īśvara*) and regard them as phases of the omnipotent and omnipresent Lord. In Chapter II, āhnika I, sūtras 40 to 44, of the *Nyāyasūtrabhāṣya*, Gautama and Vātsyāyana elucidate the conceptions of the present, past and future. Vātsyāyana points out that time is presented in our experience mainly through the help of motion and not through association with distance. The Bhāṣyakāra observes under II—1—41,—"*Nādhvavyaṅgyaḥ kālah, kim tarhi kriyāvyaṅgyaḥ*". A *kriyā*, as understood by Vātsyāyana in this context, is not a single activity but

a series of activities. The conception of a *kriyā* or *karma*, even in its strict sense, is inseparably bound up with the conception of duration, every *kriyā* lasting for four *kṣaṇas* (moments) as already explained in page 16, part III, *supra*. In this connection, it should be remembered that though there can be no contact between two all-pervasive substances (*vibhudravya*), there is contact between one such substance and another substance limited in size; for contact presupposes movement, and in the case of a substance limited in size, movement is possible, though it is not possible in the case of an all-pervasive substance.

11

T—The substratum in which cognition inheres is the soul (*ātman*). It is of two kinds—the supreme Soul and the individual soul. Of these two, the supreme Soul is one and is the omniscient Lord. The individual soul, on the other hand, is different in association with different organisms or bodies, though it is all-pervasive and eternal.

12

T—Mind (*manas*) is the sense by means of which pleasure and such other (perceptible qualities of the soul) are direct-

ly apprehended. There are innumerable minds (*manāṁsi*), since they are specifically linked up with each soul and they are atomic and eternal.

Ātman (soul) is the substratum in which knowledge inheres. This definition is quite adequate to indicate that the *soul* is a substance (*dravya*) and to differentiate it from other substances. One's own *soul* or *self* is, according to Nyāya, revealed in one's inner perceptual experience arising through the inner sense of mind, independently of the external senses, *i.e.*, in one's *mānasa-pratyakṣa* which takes the forms —'I know', 'I will', 'I feel', 'I wish' ('*aham jānāmi*', '*aham yate*', '*aham sukhī*', '*aham icchāmi*'). It should be noted that, even in such inner experiences, it is never presented by itself, but it is presented only as the substratum of knowledge or consciousness (*jñāna*), volitional effort (*kṛti=yatna*), pleasure and pain (*sukha, duḥkha*) and desire (*icchā*). For this reason, the Naiyāyikas hold that one's own soul or self is revealed in mental perception (*mānasapratyakṣa*), only in association with one or the other of its perceptible special qualities (*yogyaviśeṣaguṇayogenaiva*). It is believed by some that the Vaiśeṣikas hold that *ātman* is imperceptible and that they differ from the Naiyāyikas in this respect. The authority of Kaṇāda's sūtra VIII —2 (*tatrātmā manaścāpratyakṣe*) is also invoked in this connection. Praśastapāda also seems to support this view in his statement that, though *ātman* is subtle

and imperceptible, he is inferred as the conscious agent who uses the senses as instruments in producing cognitions :—*Cf.*—

"*Tasya saukṣmyāt apratyakṣatve'pi karaṇaiḥ śabdādyupalabdhyanumitaiḥ śrotrādibhiḥ samadhigamaḥ kriyate*" (*Praśastapādabhāṣya*—Viz. S. S. page 69). This belief is based on a misapprehension which threatens to become a permanent feature of many an English treatise dealing with Indian logic. The fact, however, seems to be that both Kaṇāda (*Cf.*—*Vaiś. Sū.* III—ii—9 and 10) and Praśastapāda (*Cf. Bhāṣya*—Viz. S. S., pages 70 187) admit that one's own *ātman* is revealed in one's own mental perception. Śrīdhara also draws attention to this in his *Kandalī* (Viz. S. S. page 71) when he observes that, though *ātman* is directly perceived by the *manas*, as *agent* or *owner* through association with the body and senses with which he came to be invested as a result of his own deeds, yet imperceptibility (*apratyakṣatva*) happens to be predicated with reference to *ātman*, merely in view of the soul falling outside the range of the external senses. The leading exponents of the Nyāya-Vaiśeṣika system are, however, agreed that one person's soul cannot be perceived by the *manas* of another person and that, even in the case of one's own soul, mental perception (*mānasapratykṣa*) is misleading since it often lumps up *ātman* and body into one jumble. For this reason, in order to prove the existence of *soul* as a distinct entity and to differentiate it from the body, the senses, the vital airs and such other things, it would

be necessary to resort to inference. Two typical arguments adduced by the Vaiśeṣikas and Naiyāyikas in this connection are worthy of consideration. From the movement of a chariot, one ordinarily infers the presence of a charioteer who drives it; even so, one infers an individual soul who *drives* a body, from its various activities. Knowledge and such other qualities, normally perceived only by the inner sense *manas*, require an intimately related substratum in which they inhere, for the reason that qualities invariably inhere in substances; all other substances being eliminated, a distinct substance, in which knowledge and such other qualities inhere, should be recognised; and that substance is called *ātman*. Since individual experiences vary in a definite manner, the individual *ātman* associated with one body should be taken to be different from the individual *ātman* associated with another body. At the same time, in order to account for remembrance of previous experiences and for the first instinctive effort which a new-born baby, immediately after its birth, puts forth to preserve its life by means of the usual suck, it would be necessary to assume that every individual soul is permanent and eternal. It is an accepted principle that everybody reaps as he sows and never reaps what he does not sow; and in order to avoid conflict with this principle, it would be necessary to ascribe to every *jīva*, pre-natal existence and persistence after death. The soul cannot be atomic in size; for, cognition and such other special qualities are perceived by the inner sense—*manas*, while the qualities of atoms can never be perceived. Nor can the soul be of medium

size (*madhyamaparimāṇa*); for, anything which has the size called *mahattva* (largeness) and which is not all-pervasive (*vibhu*), is non-eternal and therefore comes to an end; but *ātman* cannot come to an end as already explained. On these grounds, the Nyāya-Vaiśeṣika system maintains that there are innumerable souls and every *ātman* is eternal (*nitya*) and all-pervasive (*vibhu*). Though the soul is present everywhere, consiousness and other special qualities attributed to it are produced within the sphere delimited by body (*śarīra*); and this is the reason why body is described as the field of *ātman's* experience— (*ātmano bhogāyatanam śarīram*).

According to Nyāya, *ātman* is of two kinds—the individual soul (*jīva*) and the supreme Soul (*paramātman*). Fourteen qualities are ascribed to the former—*viz.*:—number, size, contact, disjunction, separateness, cognition, pleasure, pain, desire, dislike, volitional effort, merit, demerit and reminiscent impressions; and eight qualities are ascribed to the latter—*viz.*:—number, size, contact, disjunction, separateness, cognition, desire, and volitional effort. The Naiyāyikas accept the supreme authority and infallibility of revealed texts (*śruti*) and recognise, on the authority of those texts, the existence of omnipotent and omniscient God. He should be brought under the class of substances called *ātman*, for the reason that he is the intimate substratum (*samavāyin*) of eternal knowledge. With a view to removing such doubts, misapprehensions and difficulties as may arise in this connection, the Naiyāyikas seek to

support their theistic doctrine, ultimately based on *śruti*, by means of syllogistic arguments. Udayanācārya of the tenth century A. D., who is the greatest champion of Nyāya theism, suggests no less than eight syllogistic arguments in support of the Nyāya view that the whole creation is made by God who is omniscient, omnipotent and eternal. Earth and such other products (*kārya*) constituting the created world should have been created by a conscious agent having a full and definite knowledge of all the details relating to the required causal apparatus; and such an agent in the case of the whole creation cannot conceivably be a *jīva* (individual soul) and should therefore be the supreme Soul (*Paramātman* = *Īśvara*). At the beginning of creation (*sṛṣṭi*), the volitional effort (*yatna*) leading to the concretive activity (*āyojana*), which produced contact between two atoms, should be taken to inhere in a conscious being; and the concious being cannot be *jīva* and should be *Īśvara*. The various planets are sustained in their position and do not sink down or dash against each other; this should be due to the sustaining effort (*dhṛti*) of some conscious being, who is *Īśvara*. The intelligent being, who is originally responsible for the first introduction (*pada*) into the world of certain indispensable crafts and arts like weaving and pot-making, cannot be *jīva* and should be taken to be *Īśvara*. The infallibility of the Vedas depends on the unfailing validity of the knowledge derived from them; that knowledge is always valid on account of the eternal purity of the source from which the Vedas originated; and that source is the omniscient God. The

vedic texts consisting of sentences should have been composed by some intelligent author; and that author of supreme intelligence is the omniscient God. The number 'two' (*dvitvasaṁkhyā*), belonging to two atoms, is the cause of the size of dyads (*dvyaṇuka*); two and the higher numbers are all products resulting from the enumerative cognition (*apekṣābuddhi*) of the person who counts; and at the beginning of creation, such enumerative cognition could be attributed only to the omniscient God and to none else. All these eight arguments are summed up by Udayana in this verse (Kusumāñjali V. 1): —"*Kāryāyojanadhṛtyādeḥ padāt pratyayataḥ śruteḥ; Vākyāt saṁkhyāviśeṣācca sādhyo viśvavidavyayaḥ.*"

It would be useful to compare the Nyāya view of *ātman* with the corresponding theories in other systems of Indian philosophy. In the Sāṁkhya-Yoga system, there are innumerable souls (*puruṣāḥ*) and every *puruṣa* is an unrelated, attributeless, self-luminous, eternal and omnipresent being who is identical with consciousness (*cit*). In the Yoga system, in addition to the ordinary *puruṣa*, God is recognised as a special type of *puruṣa* (*puruṣaviśeṣa*), who is not affected by any of the defects by which the ordinary *puruṣa* is affected and who is pre-eminently and eternally omniscient and functions as the first teacher of all the ancient teachers. The Bhāṭṭas and Prābhākaras, for all ostensible purposes, banished God from their system, for fear lest the sovereign authority and supreme pre-eminence of the Veda might be detracted from. The soul in the Bhāṭṭa system is the substratum

of consciousness and the object of inner perception (*mānasapratyakṣa*), though cognition itself is only inferred and not perceived by the *manas*; and in each body a different soul which is eternal and all-pervasive, is embodied. The Prābhākaras also recognise different, eternal and all-pervasive souls in different bodies; and the soul, however, is not the object of mental perception (*mānasapratyakṣa*), according to their system. Expressions like 'I cognize myself' (*mām jānāmi*) are understood to refer to *ātman*, not as the object (*karma*) of cognition, but merely as coming within the scope of cognition. The Prābhākara school holds that in every cognition, three factors are invariably presented—*viz.*, the object (*viṣaya*), the soul as knower or the substratum of cognition (*jñātā*), and the cognition itself (*jñāna-svarūpa*). The followers of Śrī Rāmānuja and certain other Vaiṣṇavas hold that the individual soul (*jīva*) is different in different bodies and is atomic in size (*aṇuparimāṇa*). The Bauddha idealists would not recognise a permanent soul and would reduce it to momentary consciousness (*kṣaṇikavijñāna*); while the Jaina realists would make the soul commensurate with the body. The Advaitic monists hold that the individual soul (*jīva*), which appears to vary in association with mind (*antaḥkaraṇa*) and to partake of the latter's vicissitudes, is in fact identical with the immutable and absolute reality called *Brahman*.

Mind (*manas*) is described by the Naiyāyikas as the inner sense which directly apprehends pleasure,

pain, cognition and such other perceptible qualities of the soul. To avoid confusion of one's experiences with those of another, it should be taken to be different in different individuals. On the ground that a perceptual experience can arise only through some sense (*indriya*) being brought into relation with what is perceived, an inner sense (*antarindriya*) is inferred to account for the inner perception of pleasure, pain etc. One can have only one cognition at a time; according to the Naiyāyikas, more than one cognition cannot arise simultaneously. This fact (*yugapajjñānānutpatti*) is relied upon by Gautama as the chief argument to prove the existence of *manas* an an atomic substance. *Ātman* is all-pervasive (*vibhu*) and comes into relation with all the senses and their objects at the same time. How are we then to account for the fact that two or more cognitions never arise simultaneously but come into being one after another? This has to be explained through the assumption of a substance which can come into relation with only one of the external senses at a time; and this substance is the atomic *manas* (*paramāṇuparimāṇam manaḥ*). The Nyāya-Vaiśeṣika system ascribes eight qualities to *manas*—number, atomic size, separateness, contact, disjunction, remoteness, proximity and rapidity. The Prābhākaras agree with the Naiyāyikas in the view that *manas* is an eternal atomic substance, but would not accept the view that *ātman* is the object of mental perception (*mānasa-pratyakṣa*). The Bhāṭṭas maintain that *manas* is all-pervasive and is in eternal contact with the all-pervasive *ātman*; that *ātman* and *manas*, in contact with

each other, function only within the sphere of the body (*śarīra*) with which they happen to be associated; and that our experience is inconclusive and cannot be said to be such as would rule out the possibility of several cognitions arising at the same time. The Advaitins regard *antaḥkaraṇa* or the inner instrument of knowledge as a substance constituted by light (*tejas*) and maintain that it is not a sense (*indriya*) in the strict sense of the term and that its modifications (*vṛttayaḥ*) may assume a cognitive, volitional or emotional form according as circumstances vary.

The unswerving fidelity of the Naiyāyikas to realism in a strict sense is mainly responsible for the somewhat extreme views which they have chosen to adopt in regard to *ātman* and *manas*. It would appear that the fundamental distinction between spirit and matter is either missed or ignored in the Nyāya theory, which reduces *ātman* to a mere substance and places it on a par with forms of dead matter like a stone, and which treats consciousness as a quality arising in *ātman* under certain conditions. The Nyāya realist, however, would point out that his theory of *ātman* is free from the weak holes through which the idealistic inundation may sweep away everything, such as, for instance, a shrewd mind might easily notice in the *Sāṁkhya* view that the soul (*puruṣa*) is identical with the self-luminous consciousness. It should be remembered that the Naiyāyikas have provided adequate safeguards against the materialist (*cārvāka*) fraternising with them, in the facts that *ātman* is always the seat of reminiscent

impressions (*bhāvanā*), merit (*dharma*) and demerit (*adharma*) till the moment of final release and that, even after final release, *ātman* is the seat of the annihilation of all evils (*ātyantikaduḥkhadhvaṁsa*) and not reduced to the form of an eternal stone, as some critics may fancy. *Manas*, in the Nyāya theory, is in no way better than any form of dead matter, except in respect of its fitness for a special kind of activity and of contact with *ātman*; and it is so in most of the other systems of Indian philosophy. It is, however, where the Nyāya theorist endeavours to maintain the eternity of *ātman* by making it all-pervasive (*vibhu*), that he allows himself to be tripped up by the Advaitic monist, who would triumphantly draw attention to the ultimate *merger* which the recognition of innumerable all-pervasive souls might inevitably result in. It is here that the Nyāya theory of *ātman* stands foredoomed.

It is suggested by some writers that neither Kaṇāda nor Gautama could be said to have intended to give a place in their systems to the conception of God. But it would be difficult to believe that Kaṇāda, who believed in seers and the immense scope and capacity of their knowledge (*ārṣajñāna*), did not believe in the existence of the omniscient God. There are good reasons to believe that Gautama, who would ascribe the authorship of the Veda, to the Greatest *Āpta* (truth-speaker), took God for granted and that Uddyotakara, Vācaspatimiśra and others were right in suggesting that the refutation of God's causality in the fourth chapter of Gautama's sūtras should

be understood to have reference to the relation of material cause (*upādānakāraṇa*) and effect, and not to that of the agent, an instrumental cause (*nimittakāraṇa*). It is also worthy of notice, in this connection, that the Nyāya theory of creationistic causation (*ārambhavāda*) and the atomic theory would be incomplete and unintelligible in certain respects, without explaining, as Udayana points out, the first concretive activities of pairs of atoms to form dyads, by attributing them to the volitional effort of the omniscient Creator. If the Naiyāyikas had confined themselves to the creationistic argument to prove the existence of God, their God would be reduced to a 'demiurgic potter of the macrocosmic pot' (*Brahmāṇḍakulāla*). But luckily for the Nyāya theism, Udayanācārya based many a theistic argument in his *Kusumāñjali* on the moral values recognised in the Hindu society. In the history of Indian theism, that Udayana's theistic contribution is of particular value in demonstrating the extent to which theism may press reason into service where revelation fails, as in the case of anti-Vedic Buddhists, is a fact which every student of Nyāya should remember. It is this fact that emboldened Udayana to claim to be the saviour of the world's Saviour in the following verse which tradition attributes to Udayana:—

> "*Aiśvaryamadamatto'si māmavajñāya vartase* |
> "*Upasthiteṣu bauddheṣu madadhīnā tava sthitiḥ* ||"
> In Thy almighty power, inebriate thou art and thou dost not care for me. But Thy very existence depends upon me, when the Bauddhas approach.

13

T—Colour is the quality which is perceived only by the sense of vision. It is of seven kinds—the seven varieties being white, blue, yellow, red, green, brown and variegated. It is found in earth, water and light. Of these three, in earth, all the seven varieties are found. White colour, which is not brilliant, belongs to water. White colour, which is brilliant, belongs to light.

14

T—Taste is the quality which is perceived by the sense of taste. It is of six kinds, the six varieties being sweet, acid, salt, pungent, astringent and bitter. It is found in earth and water. Of these two, in earth, all the six varieties are found; while the sweet only belongs to water.

15

T—Smell is the quality which is perceived by the sense of smell. It is of two kinds—

the fragrant and the non-fragrant. It is found in earth only.

16

T—Touch is the quality which can be perceived only by the sense of touch. It is of three kinds—the three varieties being cool, hot and lukewarm. It is found in earth, water and fire. Of these three, to water belongs the cool touch, the hot touch to fire, and the lukewarm touch to earth and air.

17

T—The four qualities beginning with colour are produced in earth through the application of heat and are not eternal. In the case of other substances, they are eternal in such of them as are eternal and they are not eternal in such of them as are not eternal.

The word 'only' in the definition of colour excludes the sense of touch. Thus the definition amounts to this:—that colour is quality which is perceived in the normal way by the sense of vision and does not come within the range of the normal perception arising from the sense of touch. In this definition it is necessary to refer to 'normal visual perception',

since even smell and such other qualities may, according to the Naiyāyikas, be brought within the range of the super-normal perception arising from the sense of vision. The word quality (*guṇa*) in the definition is necessary and it excludes the *jāti*, colourness (*rūpatva*), common to all the colours and the total negation of colour (*rūpābhāva*); for, a sense which perceives an object perceives also its *jāti* and *abhāva* under normal conditions and *rūpatva* and *rūpābhāva* can thus be normally perceived by the sense of sight. The definition of colour, as explained above, is not satisfactory; it is applicable to contact between a ray of light and a wall (*prabhābhittisaṁyoga*), the contact in such cases being visible, though not tangible. To obviate this *ativyāpti*, the definition of colour has to be modified in this manner:—'Colour has the differentia of a species of *guṇas*, which is normally visible but not tangible'—("*Tvagagrāhyacakṣurgrāhyaguṇavibhājakopādhimat*"). The definitions of taste, smell and touch set forth above have to be understood in a similar way. These pre-scientific classifications of colour and other qualities have only some historical and speculative interest. In the list of colours, the Naiyāyikas have included the variegated colour (*citrarūpa*) as a distinct variety. The reason why they have done so is to be found in their theory of *avayavin* (composite structure), which is ultimately attributable to their creationistic view of causation. In the Nyāya theory, a composite product (*avayavin*) is entirely different from its component parts (*avayava*); a cloth which is made up of threads of different colours, is seen as having a variegated

colour; the different colours belonging to the threads cannot be said to produce the corresponding colours in the single composite whole, for the reason that colour is a pervasive (*vyāpyavṛtti*) quality, unlike the non-pervasive (*avyāpyavṛtti*) contact, which may be at once present and not present in a composite unit, and for the reason that one composite unit can thus have only one colour; were it true that the cloth of variegated colour has no colour apart from those of the component threads, the composite cloth itself would be devoid of any colour and would therefore become normally invisible, visual perception ordinarily depending upon the presence of colour which is not sub-perceptional (*anudbhūta*) but perceptible (*udbhūta*); and on these grounds, in order to account for the visual perception of a variegated cloth, it becomes necessary to recognize variegated colour (*citrarūpa*) as a distinct variety of colour. In cases where a composite product is made up of component parts having different iastes or different smells, the *avayavin* itself has no taste or smell and the different tastes or smells that may be perceived belong to the *avayavas*. In such cases, there is no necessity for postulating any distinct variety of taste or smell known as *citrarasa* (varied taste) or *citragandha* (varied smell).

Colour, taste, smell and touch admit of change in earth through baking (*pāka*), which is explained by the Naiyāyikas as amounting to contact of a special kind with fire (*vijātīyatejassaṁyoga*). The Vaiśeṣika theorists hold that, when a pot is baked or when a mango ripens through heat, the composite products get

disintegrated down to the stage of atoms; the qualities of colour, taste, smell and touch in those atoms are destroyed by heat; and a different colour, taste, smell and touch are produced; and then integration takes place, new dyads, triads and other composite products being formed in accordance with the *adṛṣṭas* of the individual souls concerned with such products. This theory of *pāka* is known as *pīlupākavāda* or 'the theory of atoms being burnt'. The Nyāya theorists, on the other hand, hold that composite products are left intact in *pāka* and are not disintegrated and that their colour and such other qualities are replaced by corresponding qualities of different species. This theory of *pāka* maintained by the Naiyāyikas is known as *piṭharapāka-vāda* or 'the theory of composite wholes being burnt.' It should be remembered, in this connection, that in the Nyāya-Vaiśeṣika system, earth is the only substance which admits of the special process of burning called *pāka*, though contact with fire is quite possible in the case of any other substance.

18

T—Number is the special cause of enumerative expressions, such as one, two and so on. It is present in all the nine substances and it is represented by numbers beginning from *one* and ending with *parārdha* (one thousand crores of crores). Number *one* may be everlasting

or non-eternal—everlasting in everlasting substances and non-eternal in non-eternal substances. Number *two* and the higher numbers are non-eternal everywhere.

The Nyāya-Vaiśeṣika theory of 'number' is one of the instances of the realistic excesses of the Nyāya-Vaiśeṣika ontology. Number is a quality (*guṇa*) according to this system and is an objective reality. Number being a quality, how would the Naiyāyikas account for propositions like 'there are twenty-four qualities' (*caturviṁśatirguṇāḥ*)? They would explain such propositions as referring to numbers co-existent with qualities in substances or as referring to the relation of objectness (*viṣayatā*) between qualities and peculiar type of cognition known as *enumerative cognition* (*apekṣābuddhi*). According to the Nyāya-Vaiśeṣika theory, two (*dvitva*) and the higher numbers are produced in the substances which are counted and come within the scope of enumerative cognition (*apekṣābuddhi*). *Apekṣābuddhi* in this system is the cognition involved in the process of counting and it takes the form 'This is one; this is one; and thus these are two' (*ayam ekaḥ, ayam ekaḥ, āhatya, dvau*). Though a cognition lasts only for two moments (*kṣaṇa*) and comes to an end in the third moment from its origin, *apekṣābuddhi* lasts three moments from its origin and comes to an end in the fourth moment. Why the exponents of the Nyāya-Vaiśeṣika system

allow a longer lease of life to *apekṣābuddhi* than to other varieties of cognition requires some explanation. *Apekṣābuddhi* is the cause of 'two' (*dvitva*) and the higher numbers. If *apekṣābuddhi* were to come to an end at the third moment from its origin, *dvitva* would come to an end at the fourth moment of *apekṣābuddhi*. *Apekṣābuddhi* arises at a particular moment; at the next moment, *dvitva* arises, and may come into relation with an external sense—say sight—at that moment; the indeterminate perception of *dvitvatva* (*dvitvatvanirvikalpaka*) comes into being at the third moment and the determinate perception of *dvitva* arises at the fourth moment; if *apekṣābuddhi* were to come to an end at its third moment, *dvitva* would cease to exist at the fourth moment, when it is actually seen; and to say that a thing is seen at the moment at which it ceases to exist is obviously absurd. In order to avoid this absurd result, the Nyāya-Vaiśeṣika hypothesis of *apekṣābuddhi* allows to it a life of three moments, its end taking place at the fourth moment from its origin and being followed at its fifth moment by the end of *dvitva*, which continues to exist and comes to be seen at the fourth moment. In Nyāya terminology *ekatva*, *dvitva* and such other terms ordinarily denote number (*saṁkhyā*), and may, in certain cases, denote the relation of being the object of a particular enumerative cognition (*apekṣābuddhi-viśeṣa-viṣayatva*). *Ekatva* may also be taken occasionally in a negative sense, when it is understood to mean uniqueness or 'being not seconded by another thing of the same species' (*svasajātīyadvitīyarāhityam*). In Vaiśeṣika treatises like

Śaṁkaramiśra's *Sūtropaskāra,* the process by which *apekṣābuddhi* originates and functions is described thus: "The sense concerned comes into relation with the thing in which *dvitva* is to be produced; then the indeterminate perception of *ekatvatva,* common to all the numbers called *ekatva,* arises; then the co-ordinating group-cognition (*samūhālambana*) of two units of *ekatva* arises; then *dvitva* itself comes into being; then the indeterminate perception of *dvitvatva,* the *jāti* common to all the numbers called *dvitva,* arises; then follows the determinate perception of *dvitva*; then the two substances having *dvitva* are cognized; and lastly such a cognition produces the corresponding impression (*saṁskāra*) in the soul." While *ekatva* is completely contained in a single container (*pratyeka-paryāpta*), *dvitva* and the higher numbers are partially contained (*vyāsajyavṛtti*) in each of the containers and completely contained only in groups of two and so on.

The Nyāya conception of number—more especially of two and the higher numbers—as qualities inhering in substance may be described by the opponents of the Nyāya-Vaiśeṣika realism and pluralism, as well as by the exponents of the modern school of Nyāya (*navya-nyāya*), as specimens of the warty overgrowths disfiguring the complexion of Nyāya realism. But shrewd critics who can probe into the heart of Nyāya may be able to find in it an effective check to monistic thought which seeks to efface completely all the numbers and their metaphysical implications holding together the component parts of the social fabric.

19

T—Size is the special cause of expressions pertaining to measurement. It is found in all the nine substances. It is of four kinds—atomic, large, long and short.

20

T—Separateness is the special cause of expressions such as 'this is separate from that'. It is found in all the substances.

21

T—Contact is the special cause of expressions such as 'these are in contact with each other.' It is found in all the substances.

22

T—Disjunction is the quality which destroys contact. It is found in all the substances.

23

T—Remoteness and proximity are the special causes of expressions such as 'this is remote,' 'this is near'. They are found in the four substances

beginning with earth and in *manas*. They are of two kinds, those that are due to time and those due to space. In a remote substance, spatial remoteness is found; and in a substance lying near, spatial proximity is found. In an older person, temporal remoteness is found; and in a younger person, temporal proximity is found.

It will be seen that sections 18 to 21 and section 23 in the text define number, size, contact, remoteness and proximity as special causes of the respective expressions which refer to them. The term *vyavahāra* is used in the text and is usually understood in the sense of 'expression in words' or 'putting into words' (*śabda-prayoga*). One cannot say 'this is one' (*ayamekaḥ*) or 'this is large' (*ayam mahān*), unless the thing referred to has the attribute connoted by the words 'one' (*eka*) or large (*mahat*). By elimination, the attribute *ekatva* or *mahattva* can be shown to be distinct qualities. In the case of the expressions referred to, our experience enables us to establish the relation of causality between them and the qualities connoted by the expressions used. God, time, space and *adṛṣṭa* (the unseen impressions resulting from good or bad deeds) are believed by the Naiyāyikas to be common causes of all products; and to exclude these common causes (*sādhāraṇakāraṇa*), the phrase *asādhāraṇa-*

kāraṇa (special causes) is used in the definitions of number, size, contact etc. All these definitions are based on the supposition that the expressions referred to are all correct and should be taken in their popular sense.

In the Nyāya-Vaiśeṣika system, the size of the atoms—called *pārimāṇḍalya* and the size of all-pervasive substances (*vibhu*)—called *paramamahattva* are eternal. The cause which produces a size is the corresponding size of the component parts, as in the case of all the degrees of *mahattva* above that of a triad and below that of an all-pervasive substance; or it is the number (*saṁkhyā*) of the component parts, as in the case of the sizes of a triad and a dyad; or it is loose contact (*pracaya*) of the component parts as in the case of a ball of cotton. The two sizes denoted by the words 'long' and 'short' (*dīrghatva* and *hrasvatva*) may well be brought under *mahattva* and *aṇutva* and need not be recognised to be distinct varieties of size.

The distinct position which separateness (*pṛthaktva*) occupies in the list of qualities recognised by the Vaiśeṣikas is dependent chiefly upon the view that the experience embodied in the proposition 'A jar stands out separate from a cloth' (*ghaṭaḥ paṭāt pṛthak*) should be distinguished from the experience embodied in the proposition 'A jar is *not* a cloth' (*ghaṭaḥ paṭo na*) and that the former should be interpreted as an affirmative proposition referring to the positive entity called *pṛthaktva* and the latter as a negative proposition referring to the negative category of reciprocal non-existence called *anyonyābhāva*. Though the older Naiyāyikas

support this view, some of the Naiyāyikas like Raghunātha Śiromaṇi shrewdly see that this way of differentiating *pṛthaktva* from *anyonyābhāva* would only amount to the recognition of some useless distinction without any real difference and they discard *pṛthaktva* along with similar useless qualities like remoteness and distance, which are merely temporal and spatial relations involving a larger or smaller number of intervening contacts (*Vide* part III—p. 14).

It would be useful to refer again, in this connection, to the remarks at pages 51 and 52 of part III, about the Nyāya conception of contact (*saṁyoga*) as a quality and as an external relation possible only between two substances. The Nyāya theorists would not recognize contact between two all-pervasive substances. Contact may arise from activity (*kriyā*) or from another contact. The latter variety is to be found in the contact which arises between one's body taken as a whole and a book, when the book is held in one's hand; and this variety of *saṁyoga* called *saṁyogaja-saṁyoga* is an inevitable result of the Nyāya view that a composite whole (*avayavin*) is totally different from its component parts. The contact which arises when one hits with force is called *abhighāta* (striking) and it causes sound or some activity resulting in disjunction between the things joined by such contact; and a contact which does not cause sound or does not cause some activity of the kind described is called *nodana* (pushing). In the Nyāya system, contact is a typical instance of a non-pervasive object (*avyāpyavṛtti*). Certain

things are spatially non-pervasive (*daiśikāvyāpyavṛtti*); for instance, contact with a monkey (*kapisaṁyoga*) is spatially non-pervasive in the sense that it may be said to be present and not present in the same tree at the same time, with reference to its top and foot. In a similar way, all the producible things (*jānyapadārtha*) are temporally non-pervasive in the sense that they may be said to be present and not present in undivided time (*mahākāla*), with reference to the periods preceding and following their production. Advanced students of Advaita may realise that the conception of *avyāpyavṛttitva* developed by the Naiyāyikas is, indeed, used by them as their life-belt when they have to save their realism from being drowned in the Advaitic deluge in which everything other than the absolute Brahman sinks down to the level of *mithyā* (unreal) and turns out to be relatively real in the sense that it co-exists with its own non-existence.

The Vaiśeṣika theorists argue that disjunction (*vibhāga*) should not be equated with the negation of contact in any form; and the older Naiyāyikas support them. Disjunction cannot be the antecedent negation of contact (*saṁyogaprāgabhāva*); for, in cases where we have the experience 'these are disunited' (*imau vibhaktau*), we do not have the experience 'these will come into contact with each other' (*imau saṁyuktau bhaviṣyataḥ*). Disjunction cannot be the total negation of contact (*saṁyogātyantābhāva*); for, in that case, one should have the experience 'these two qualities are disunited' (*imau guṇau vibhaktau*), but one never has

such experience of *vibhāga* in the case of qualities. In every case of disjunction, one invariably realizes that contact is destroyed; but disjunction itself cannot be identified with loss of contact (*saṁyoganāśa*), for the reason that contact is also lost when one of the substances in contact with each other happens to be destroyed and that, in such cases, one does not speak of disjunction (*vibhāga*). Loss of contact between two substances which continue to exist has to be accounted for. It cannot be the direct result of discretive movement (*kriyā*). For, in a case where a particular finger, as a result of its activity, comes into contact with a tree and the hand likewise comes into contact with the same tree as a result of its movement, the finger may be moved away from the tree and thus lose its contact with the tree; in that case, one speaks of the hand also losing contact with the same tree; the movement of the finger may cause the loss of contact between the finger and the tree; and this movement does not belong to the hand and cannot, therefore, have anything to do with the loss of contact between the hand and the tree. In such instances, the loss of *saṁyoga* should be attributed to a cause other than movement (*karma*) and this cause is called *vibhāga* or disjunction. By a process of elimination, disjunction is brought under the category called *guṇa*. This argument set forth by the Vaiśeṣikas to maintain that *vibhāga* is a distinct quality involves many an assumption which cannot be satisfactorily sustained. The later Naiyāyikas realize the weak points in this argument and bring *vibhāga* under loss of contact (*saṁyoganāśa*).

The qualities mentioned above, *viz.*—number, size, separateness, contact, disjunction, remoteness and proximity, and fluidity and viscidity are capable, of being perceived by two of the external senses—the sight and the touch. Sections 25 and 26 in the following text deal with fluidity and viscidity.

24

T—Weight is the non-intimate cause of the first downward motion (of a falling substance). It is found in earth and water.

25

T—Fluidity is the non-intimate cause of the first flow (of a fluid substance). It is found in earth, water and light. It is of two kinds—natural fluidity and artificial fluidity. Natural fluidity is found in water. Artificial fluidity is found in earth and light. In certain varieties of earth like ghee, etc., fluidity of the artificial variety is brought about through contact with fire; and it is also found in gold and such other varieties of light.

26

T—Viscidity is the quality which causes the lumping up of

powder etc.,—*i.e.* the particles of powder, etc., to adhere to each other. It belongs only to water.

The above definitions of *gurutva*, *dravatva* and *sneha* have hardly any scientific value and they are based wholly on speculation resting upon certain popular notions. It should be noted that *gurutva* (weight), according to Nyāya theorists, is beyond the range of sense-perception (*atīndriya*). The Naiyāyikas maintain that, though oil and such other substances appear to have viscidity (*sneha*), it really belongs to water which forms part of those substances.

27

T—Sound is a quality which is perceived by the ear. It belongs only to the ether. It is of two kinds —*viz.*, noise and alphabetic sound. Noise is found in a drum and alphabetic sounds form languages like Sanskrit.

The Nyāya-Vaiśeṣika theorists distinguish between inarticulate noise called *dhvani* and articulate alphabetic sounds called *varṇa*. They further distinguish three varieties of sounds, in view of the three kinds of causes which may produce them. These three varieties are:—(1) the sound caused by contact (*saṁyogaja*), (2) the sound caused by disjunction (*vibhāgaja*), and (3) the sound caused by another sound itself (*śabdaja*). The first variety arises when a drum is beaten by a stick; the second variety arises when a bamboo is split;

and the third variety is to be found in the series of sounds successively arising in the *ākāśa* intervening between a drum, for instance, and the sense of hearing. In Indian philosophy, a considerable measure of speculative value is attached to the Nyāya theory of *śabdaja-śabda* or series of successive and exactly similar sounds arising in a continuous chain, beginning with the first sound caused in the portion of ether delimited by the substance that is struck, such as a drum, and ending with the last sound that is caused in the portion of ether representing the sense of hearing and is actually heard. The Naiyāyikas explain the way in which a sound-series is produced in auditory perception, by means of two illustrations—*viz.*, the illustration of 'little wave and big wave' (*vīcītaraṅganyāya*) and the illustration of *kadamba* buds. These two illustrations suggest two ways of explaining how a sound comes to be heard on all sides and in all the ten directions, including the intermediate points and up and down. A little circular wave springs up; around it a bigger wave arises; around it a still bigger wave and so on; in this way, a circular wave of sound is caused, around it a bigger sound-wave and so on, until at last a certain sound-wave is produced in such a way that it reaches the senses of hearing which may be fit and ready to hear in all the ten directions. In this explanation, there is only one series consisting of several circular sound-waves, each coming into relation with all the ten directions. One *kadamba* filament—which first shoots up, causes several *kadamba* filaments to shoot up simultaneously in all the parts of a *kadamba* flower; in the

same way, the first sound, produced at some point, causes ten sounds to spring up simultaneously in all the ten directions; and they cause ten other sounds to spring up in all the ten directions and so on; and thus the sound in question comes to be heard on all sides. In this explanation, the series of *śabdaja-śabdas* consists of several groups of sounds, each group being taken to be a ten. In the illustration of *kadamba* bud, it should be remembered that each bud-like filament of a *kadamba* flower is described as a bud in the phrases *kadamba-mukulanyāya* and *kadambakorakanyāya*. The explanation suggested by the second illustration is considered unsatisfactory and cumbrous.

The Bhāṭṭas and Prābhākaras hold that alphabetic or articulate sounds (*varṇātmakaśabda*) are eternal. The former maintain that *varṇa* is an all-pervasive eternal substance (*nityam vibhu dravyam*); while the latter hold that *varṇa* is an eternal quality (*nityaguṇa*). The Mīmāṁsakas seek to support their view that *varṇa* is eternal by referring to the recognition which we are conscious of in the case of the same *varṇa* and which takes a form like this:—'This sound *g* which I now hear is the same as that *g* which I heard several times before' (*So'yam gakāraḥ*). One can easily see the reason why the Mīmāṁsakas are particularly solicitous to maintain the theory of the eternity of *varṇas* if one remembers that the Mīmaṁsā theory of the eternity of the *Vedas* rests upon the eternity of *varṇas*. The Vaiyākaraṇas hold that the transcendental substratum of *varṇas* called *sphoṭa* is real and permanent and that

varṇas themselves are not permanent. The Nyāya-Vaiśeṣika system maintains that every *varṇa* is caused and the *Vedas* themselves were produced by God, the recognition of the same *varṇa* like 'This *g* is that' (*So'yam gakāraḥ*) being interpreted as referring to the permanent *jāti* called *gatva* and not to the same *g*-sound (*ga-vyakti*).

28

T—(*a*) *Buddhi* and *Jñāna* are the same thing, and stand for cognition which is the cause of all verbal expressions. It is of two kinds—recollection and experience.

(*b*) Recollection is the cognition which is caused only by reminiscent impression.

(*c*) All cognitions other than recollection come under experience. There are two kinds of experiences, real and erroneous.

(*d*) The experience which cognizes an attribute as belonging to a thing which really has it, is real; and this is known as *pramā* (valid knowledge).

(*e*) The experience which cognizes an attribute as belonging to a thing in which it is not present, is erroneous.

(*f*)—Valid experience is of four kinds—*viz.*, perception, inference, assimilative experience and verbal experience.

(*g*)—The instrument of valid experience is also of four kinds—the perceptive instrument, the instrument of inference, assimilation, and sentence or proposition.

Buddhi is an ambiguous term and it is used in various senses in Sanskrit philosophical literature. Sometimes it is used in the sense of *antaḥkaraṇa*—the inner organ of knowledge. It is also used in the sense of determination (*niścaya*), which is an aspect or modification of *antaḥkaraṇa,* according to the Sāṁkhyas and Advaitins: and the connected words *mati* and *manas* are contrasted with *buddhi* in this sense, the word *mati* being used in the sense of imagination or imaginative cognition of something yet to come about (*matirāgāmigocarā*) and the word *manas* in the sense of a dubitative activity of *antaḥkaraṇa* which corresponds to doubt (*vimarśātmakam manaḥ*). The Naiyāyikas are quite consistent and definite in their use of the term *buddhi,* and they always take it to be synonymous with *mati, upalabdhi* and *jñāna*; and they take *manas* to be equivalent to *antaḥkaraṇa.*

In the text, Annambhaṭṭa's definition of *buddhi* can be explained in two ways. The former part of the text—*sarvavyavahārahetuḥ*—may be taken to form

the definition with the addition of the word *guṇa* (quality) and the term *jñāna* in the text may be understood as merely emphasizing the idea that there is no difference between *jñāna* (knowledge) and *buddhi* (cognition). Or the latter part of the text—*jñānam buddhiḥ*—may be taken to constitute a satisfactory definition of *buddhi* and may also be understood as incidentally emphasizing the idea that *buddhi* and *jñāna* are identical. According to the first explanation, the definition of *buddhi* amounts to this—"Cognition or knowledge is a quality which is the cause of all intercommunication through language." As the oft-quoted dictum—"*artham buddhvā śabdaracanā*" puts it, collocation of suitable words always follows ideas of things; and from this point of view, it is obvious that cognition is the invariable and indispensable antecedent of intercommunication through speech. But this mode of defining cognition is defective for the reason that it does not cover cases of a peculiar type of cognition called indeterminate cognition (*nirvikalpakajñāna*), which does not involve any kind of relation and which can only be inferred and can never be embodied in any proposition. *Nirvikalpakajñāna* is called *avyapadeśya* and it does not admit of being embodied in words; so, it cannot be regarded as the cause of intercommunication through expression; and thus the definition "*sarvavyavahārahetuḥ*" is vitiated by the defect of *avyāpti* (partial inapplicability or narrowness). In order to remove this defect, the usual device of *jātighaṭitalakṣaṇa* is resorted to and the scope of the definition is increased in this modified form—"Knowledge

or cognition has a *jāti* which is not found in colour and such other qualities and which is co-existent with the causality of intercommunication through speech". This is indeed a clumsy definition. Annambhaṭṭa himself sees this and suggests in his *Dīpikā* that the former part of the text "*sarvavyavahārahetuḥ*" may be taken to be merely explanatory and the latter part "*jñānam buddhiḥ*" as the definition. In the *Dīpikā*, Annambhaṭṭa says "*Jānāmītyanuvyavasāyagamyam jñānatvameva lakṣaṇam—iti bhāvaḥ.*" Thus according to him, *Jñānatva* (cognitionness), which is the generic attribute (*jāti*) characterising all cognitions, is the distinctive feature (*asādhāraṇadharma*) of cognition. He also suggests that the *jāti*, called *jñānatva*, is arrived at through the uniform experience of a cognition which invariably assumes a form like this—'I cognise a jar' (*ghaṭam aham jānāmi*), or 'I cognise a cloth' ('*paṭam aham jānāmi*). In such cases, the speaker is aware of the fact that he is cognising a jar; or, in other words, he has the *anuvyavasāya* of his *vyavasāya*, his cognition of a jar being called *vyavasāya* and his awareness or consciousness of such cognition being called *anuvyavasāya*. It is only by assuming a generic attribute (*jāti*), called *jñānatva*, as the common characteristic of all cognitions, that the uniformity in the *anuvyavasāya* referred to can be satisfactorily accounted for. And this *jāti* may, with advantage, be taken to represent the distinctive feature of cognition.

The phrase '*jñānam buddhiḥ*', in the text under consideration is also to be understood as implying a refutation of the Sāṁkhya view that *buddhi*, *upalabdhi*

and *jñāna* denote different things. In 1—1—15, Gautama, the author of the Nyāya-sūtras, says that the terms *buddhi* (cognition), *upalabdhi* (apprehension), and *jñāna* (knowledge) should be understood to signify the same thing (*buddhirupalabdhirjñānamityanarthāntaram*). Vātsyāyana, Vācaspati and Udayana interpret this *sūtra* as refuting the Sāṁkhya view that these three terms denote entirely different things. In the Sāṁkhya system, the term *buddhi* stands for the first evolute called *mahattattva*, the etymological meaning of the word *buddhi* being that which first springs up (√ *budh*=√ *udbudh*=to spring up) and that of the word *mahat* being that which grows out of, and into something else (√ *mah*=to grow or evolve). This principle called *buddhi* is the first evolute evolved out of the primordial matter, called *mūlaprakṛti*, and is, in itself, but a form of dead matter. However, through proximity to the self-luminous *consciousness* (*cit*), called *puruṣa*, the material evolute, *buddhi*, comes to be enlivened, as it were, by consciousness (*caitanya*) and undergoes various transformations, of which one of the most important is called *adhyavasāya* (determinative cognition). *Adhyavasāya*, in the Sāṁkhya sense, usually takes the form "This should be done by me" (*idam kartavyam mayā*). The Sāṁkhyas describe *buddhi*, in its *adhyavasāya* phase, as consisting of three constituent factors (*aṁśatrayavatī buddhiḥ*). These three factors are the *egoic* element (*madaṁśaḥ*), the element of voluntary decision (*kartavyamiti vyāpārāṁśaḥ*), and the objective element of 'this' (*idamaṁśaḥ*).

The egoic element or *madaṁśa*, in the Sāṁkhya terminology, is said to represent what is called *puruṣoparāga*, which is an unreal element consisting in the reflection of the absolutely passive and self-luminous *cit* called *puruṣa*, in the reflectory, mirror-like, matter called *buddhi*, or which is the result of the erroneous identification of *puruṣa* with *buddhi*. The element of voluntary decision is a real factor and represents a real modification of *buddhi*. The objective element of 'this' (*idamaṁśaḥ*) is but an objective modification of *buddhi* unfolding itself through the sense-organs; and this element is known as knowledge or cognition (*jñāna*) and is real. Apprehension or *upalabdhi* is the relation between the objective factor, called *viṣayoparāga* and represented by *idamaṁśa* and equated with *jñāna*, on the one hand, and the absolute *puruṣa*, on the other; and *upalabdhi* is thus an unreal factor, for the reason that *puruṣa*, according to the Sāṁkhyas, cannot be conceived of as having any real relation. The well-known illustration of a mirror being held before a person's face is used in this connection by the Sāṁkhyas to explain these distinctions. When a mirror is held before the face of a person, the reflection of the face is seen through the mirror. If that person happens to breath out on the surface of the mirror, the surface looks dim and the reflected image of the face also looks dim. One may fancy, in these circumstances, that the face also is dim. In this illustration, the dimness caused on the surface of the mirror is real and the fancied relation between this dimness and the face itself that is reflected in the mirror is unreal. Similarly, *jñāna* which is the cogni-

tive modification of the first evolute (*buddhi*), is a real factor; and it comes to have a false relation with *puruṣa* through his reflection in *buddhi*, in the same way as the dimness of the mirror comes to have a false relation with the real face through its reflection. This false relation is called *upalabdhi* (apprehension). It will be seen that, in the Sāṁkhya theory, *jñāna* is entirely material in its nature and origin and becomes apparently spiritualised to some extent when it comes to have a false relation with *puruṣa*; and this false relation with the spirit is called *upalabdhi* and is presented in experiences like 'I apprehend' (*aham upalabhe*). The Naiyāyikas contend that the substratum of voluntary decision (*kṛti*) ought to be regarded as the substratum also of knowledge or cognition (*jñāna*) which there is hardly adequate reason to distinguish from consciousness (*caitanya*) or apprehension (*upalabdhi*). This contention is embodied in Gautama's *sūtra* "*buddhirupalabdhirjñānamityanarthāntaram*"; and students of Nyāya are reminded of the view embodied in this *sūtra*, when they consider Annambhaṭṭa's statement "*jñānam buddhiḥ*".

Cognition is first divided into two main heads —recollection (*smṛti*) and experience (*anubhava*). Annambhaṭṭa defines recollection as a cognition caused solely by impressions. The impressions referred to here are reminiscent impressions (*bhāvanā*) derived from prior cognitions. In this definition, the word 'solely' (*mātra*) is intended to exclude recognition (*pratyabhijñā*), which is a perceptual experience (*pratyakṣa*) arising through the relation of a sense-

organ with some object (*indriyārthasaṁnikarṣa*) and through reminiscent impressions derived from a prior cognition of the same object. 'This is that person' (*so'yam puruṣaḥ*) :—cognitions of this type are instances of recognition and should not be confounded with cases of recollection. While the Advaitins and Bhāṭṭas would explain recognition (*pratyabhijñā*) as a cognitive complex consisting of two parts, one representing perceptual experience (*pratyakṣa*) and the other recollection (*smaraṇa*), the Naiyāyikas, as champions of consistency, would not accept such explanations and would banish from their world all such centaurian and monstrous complexes. Thus, in the Nyāya theory, it has become necessary to bring recognition under perceptual experience of a special type and to exclude it from the scope of the definition of recollection (*smṛti*). The Nyāya theory of *smṛti* is that certain kinds of cognition, which are different from indifference (*upekṣā*), invariably leave reminiscent impressions (*bhāvanārūpasaṁskāra*) in *ātman* and that these impressions are kindled up under certain conditions and cause recollection. Every group of reminiscent impressions causing a recollection comes to an end immediately after its effect is produced. But this would not mean that after once recollecting something, it would no longer be possible to recall it again to memory; for, every recollection would, in its turn, cause a reminiscent impression. Thus, according to the older Nyāya theory, every recollection, even when it relates to the same object, is caused by a different set of reminiscent impressions. Later Naiyāyikas and

Advaitins, on the other hand, hold that the recollections of the same object are all produced by the same set of reminiscent impressions, which merely acquire enhanced intensity through every recollection. Cognitions which admit of being reproduced in memory through reminiscent impressions are classified under three heads by the Vaiśeṣikas and Naiyāyikas of the older school:— *paṭupratyaya*, *abhyāsapratyaya* and *ādarapratyaya*. The normal type of cognition which involves the minimum degree of attention sufficient to ensure reproducation in memory is called 'vivid cognition' (*paṭupratyaya*). By repeatedly revolving a certain idea in one's mind, one comes to have what may be called 'repetitional cognition' (*abhyāsapratyaya*). When one's mind gets riveted to a wonderful or extraordinary object, the cognition that arises is known as 'regardful cognition' (*ādarapratyaya*). All the cognitions other than recollection (*smṛti*) are technically known as *anubhava*. This technical use of the term *anubhava* is common in śāstraic literature and it has to be rendered by the English equivalent 'experience'. In its technical sense, as used in Nyāya-Vaiśeṣika literature, it may denote any kind of experience direct or indirect, perceptual (*prātyakṣika*), or inferential (*ānumānika*), or verbal (*śābda*). In some places, the word *anubhava* is somewhat loosely used in the sense of direct experience or direct realization. Students of Nyāya should take care to avoid confusion between these two uses of word *anubhava*.

Anubhava is divided in Nyāya literature into real (*yathārtha*) and unreal (*ayathārtha*). The first variety

is also called *pramā* and the second variety is also called *bhrama*. The etymology of the term *pramā* draws attention to the fact that the experience denoted by that term is *sound* or *valid*, as the prefix *pra* indicates. The etymology of the term *bhrama* draws attention to the fact that the thinker's mind *goes astray* in every case of erroneous experience. The term *yathārtha* means exactly corresponding to the object; and the definition of valid experience, that it cognises an attribute as belonging to an object which really has it, is directly based on the meaning of the term *yathārtha*; and likewise, the definition of erroneous experience, that it cognizes an attribute as belonging to an object which, in fact, does not have it, is based on the meaning of the term *ayathārtha*. To cognize a piece of silver lying before one as a piece of silver (*purovartini rajate 'idam rajatam' iti pratītiḥ*) is valid experience; and to cognize a shell, or mother of pearl, or nacre as it is called, as a piece of silver (*śuktau 'idam rajatam' iti pratītiḥ*) is erroneous experience.

In order to understand correctly the definitions of valid and erroneous experiences, as given in the text, it is necessary to acquire some knowledge of the terminology by which the Naiyāyikas indicate the content of a cognition, with a measure of quantitative precision which is not ordinarily achieved through English expression. Every determinate experience involves an objective complex as representing its objective content. The objective content of cognition is called *viṣaya* (objective); the cognition itself is known as *viṣayin* (subject); and the relation between a cognition

and its object is known as *viṣayaviṣayibhāva* (subject-object-relation). In the Nyāya-Vaiśeṣika system, this is conceived of as an external relation between two distinct relata which are two realities connected with each other for the time being. The problem of the relation between the subject (*viṣayin=jñāna*) and object (*viṣaya*) is solved by the Naiyāyikas in this way. Objects like a jar or a piece of cloth exist outside the sphere of cognition (*jñāna*) as realities independent of cognition. Through *viṣayatā* (objectness), which is a kind of self-linking relation (*svarūpasambandha*) and is merely a phase of the object cognized, an object comes into relation with cognition, which has the correlated counterpart of *viṣayatā* known as *viṣayitā* (subjectness). *Viṣayitā* is also a kind of self-linking relation and is merely a phase of the *viṣayin* which cognizes. The Naiyāyikas hold that, while several realities may exist independently of cognition, the latter never exists independently of, and as dissociated from, the objects that are cognized; and this is regarded by the Nyāya theorists as a state of things fatal to idealism. They forget, however, that their realism ultimately rests upon experience and what is relied upon as the only guarantee of the objective reality of the external world is the content or form which is involved in experience, and which idealism or subjectivism can easily merge in cognition.

The Nyāya relation of *viṣayaviṣayibhāva* involves two correlated parts known as *viṣayatā* (objectness) and *viṣayitā* (subjectness) and the correlation of these two parts is denoted by the word *nirūpita*. The

objective content of a determinate cognition or judgment is constituled by three parts,—*viz.*, the principal or leading concept called *viśeṣya* (substantive), one or more subordinate concepts called *viśeṣaṇa* or *prakāra* (adjunct), and a relation (*saṁsarga*) connecting the *viśeṣaṇa* and *viśeṣya*. These three parts form the complex object (*viṣaya*) of a judgment; the aspect of *viṣayatā* which belongs to the *viśeṣya* is called *viśeṣyatā* (substantiveness); that which belongs to the *viśeṣaṇa* is called *viśeṣaṇatā* (adjunctness); and that which belongs to *saṁsarga* is called *saṁsargatā* (relationness). In the judgment 'the cloth is red' (*raktaḥ paṭaḥ*), cloth is the *viśeṣya*, red colour is presented as the *viśeṣaṇa*, and the relation between the redness and cloth is inherence (*samavāya*) and that is presented as the *saṁsarga*. The *viṣayatā* which belongs to these three things is presented in three forms, *viz.*,—*viśeṣyatā*, *viśeṣaṇatā* or *prakāratā* and *saṁsargatā*. These three aspects of *viṣayatā* are correlated to each other and to the *viṣayitā* (subjectness) which belongs to the cognition in which they are presented. The correlation of these factors is expressed in Sanskrit by the symbolic terms *nirūpaka* and *nirūpya*. The boundary of each of the objective factors is exactly defined by a reference to the delimiting feature which is also presented in the cognition under consideration. In the example referred to, cloth is presented as *viśeṣya*, not under the aspect of *dravyatva* (substanceness), but under the specific aspect of *paṭatva* (clothness); red colour is presented as *viśeṣaṇa* or *prakāra*, not under the aspect of *guṇatva* (qualityness), but under the specific aspect of *raktatva*

(red-colourness); and *samavāya* (inherence) is presented as *saṁsarga*, not under the aspect of *sambandhatva* (relationness), but under the specific aspect of *samavāyatva* (inherenceness). The required specifications in these cases are made by referring to *paṭatva*, *raktatva* and *samavāyatva* as the delimiting adjuncts (*avacchedaka*) respectively of the *viśeṣyatā* in the cloth, the *prakāratā* in the red-colour and the *saṁsargatā* in inherence. Thus by a clever use of the terms *avacchedaka* (delimiting), *avacchedya* or *avacchinna* (delimited), and *nirūpaka* or *nirūpita* (correlating or correlated), in the instance taken for illustration, *viz.*,—the judgment *'raktaḥ paṭaḥ'* (the cloth is red), the objective content may be described in the following way, with a considerable measure of quantitative precision:— "It is a cognition whose *viṣayitā* (subjectness) is correlated to the *viśeṣyatā* (substantiveness) delimited by clothness (*paṭatva*), the *viśeṣyatā* in its turn being correlated to the *prakāratā* (adjunctness) delimited by red-colourness (*rakta-rūpatva*), and the *saṁsargatā* (relationness) correlated to the said *prakāratā* and *viśeṣyatā* being delimited by inherenceness (*samavāyatva*). The Sanskrit expression which exactly describes the objective content of the judgment, 'the cloth is red' (*raktaḥ paṭaḥ*), may be set forth thus:—"*raktatvāvacchinnaprakāratānirūpita—paṭatvāvacchinnaviśeṣyatānirūpita — samavāyatvāvacchinnasaṁsargatānirūpita—viṣayitāśāli jñānam*". In this way the disposition of the component factors of the objective content of a cognition is exactly indicated by means of the symbolic words *avacchedaka* and *nirūpita*.

The definitions of *pramā* and *bhrama*, as given in the text, are somewhat defective, since they do not indicate correctly the correlation between the *viśeṣyatā* and *prakāratā*. In the definition of *pramā*, for instance, as given in the text, the substantive having a certain attribute is referred to as *viśeṣya* and the particular attribute as *prakāra*. This amounts to saying that in *pramā*, if silverness is presented as *prakāra*, silver having silverness (*rajatatva*) in it is also presented as *viśeṣya*. Though, for all practical purposes, this looks like a correct definition of *pramā*, it would break down when considered in the light of certain group-cognitions (*samūhālambana*), in which two or more substantival factors (*viśeṣya*) are presented as co-ordinate objects associated with certain adjuncts. Nacre and silver (*śukti* and *rajata*) may both be present in a certain place; a group-cognition, which at once mistakes nacre for silver and silver for nacre, may arise; it is a *samūhālambanabhrama* which takes the form.—"These are silver and nacre" (*ime rajataśuktī*); the definition of *pramā* as given in the text would be applicable to this case of *bhrama* for the reason that silverness (*rajatatva*) and nacreness (*śuktitva*) are presented as attributes (*prakāra*) and the two things, nacre and silver, which really have the two attributes mentioned, are presented as leading concepts (*viśeṣya*). There is nothing in the definition of *pramā*, as given in the text, which would exclude such cases of *samūhālambana-bhrama*. To exclude such cases, it is necessary to point out that the adjunctness (*prakāratā*) of the attribute presented in a valid cognition is correlated with the

substantiveness (*viśeṣyatā*) of the thing really having that attribute. In the erroneous group-cognition (*samūhālambana*) above referred to, the substantiveness of nacre is not rightly correlated with the adjunctness of nacreness but wrongly correlated with the adjunctness of silverness; and similarly the adjunctness of nacreness and the substantiveness of silverness are wrongly correlated with each other. A correct description of this erroneous group-cognition in accordance with the technical terminology of the Naiyāyikas would facilitate a correct appreciation of these remarks. This *samūhālambana* may be described thus in Sanskrit:—

"*rajatatvaniṣṭha-prakāratānirūpita- śuktiniṣṭha- viśeṣyatā ekā, śuktitvaniṣṭha-prakāratānirūpita-rajataniṣṭhaviśeṣyatā aparā, etādṛśaviśeṣyatādvayanirūpita-viṣayitāśāli 'ime śuktirajate' iti samūhālambanam.*"

Thus it will be seen that the correct and complete definition of *pramā* or valid cognition is that it is a cognition in which the thing that is presented as substantive (*viśeṣya*) has the attribute which is presented as adjunct (*prakāra*) and the substantiveness (*viśeṣyatā*) of the former is presented as correlated with the adjunctness (*prakāratā*) of the latter. For a similar reason, the definition of *bhrama*, as given in the text, should be amplified with a view to securing greater precision. A *bhrama* is an erroneous cognition in which the thing that is presented as substantive (*viśeṣya*) does not have the attribute presented as adjunct (*prakāra*), though the substantiveness (*viśeṣyatā*) of the former is presented as correlated

with the adjunctness (*prakāratā*) of the latter. This definition would be applicable to cases of erroneous cognition like 'this is silver' (*idam rajatam*), where nacre is mistaken for silver; and it also excludes cases of valid group-cognition (*samūhālambanapramā*) like 'these are silver and nacre' (*ime rajataśuktī*), where both silver and nacre are seen as such and not confounded with each other.

In this connection, it is desirable to say a few words about the way in which the Nyāya theorist solves the problem of knowledge and the connected questions of truth and error. The realism of Nyāya, which recognizes complete difference (*bheda*) between the object (*viṣaya*) and subject (*viṣayin*) or between the known object (*jñeya*) and the cognizing knowledge (*jñāna*) has inevitably to face the problem of truth and error and to suggest some solution which may be consistent with the Nyāya theory. If the *jñeya* should be wholly different from *jñāna*, how is the gulf between these two real factors to be bridged over, seeing that they are fundamentally different? How is knowledge possible at all? Knowledge is a real factor and its object is also a real factor existing independently of knowledge. To a Naiyāyika, *esse* can never be *percipi*. If it is the nature of knowledge, as the Naiyāyika contends, to come into relation with a real object existing outside knowledge, what is it that bridges over the gulf between these two factors? The Nyāya theorist who recognizes a scheme of external relations finds it easy to point out that through the self-linking

relation (*svarūpasambandha*) of subject and object (*viṣayaviṣayıbhāva*), the cognized reality (*jñeya*) and the cognizing reality (*jñāna*) can be brought together. The secret of the Nyāya conception of *svarūpasambandha* is that relation is but a phase of reality and every real object involves that phase. From the Nyāya point of view, it is perfectly intelligible that knowledge is knowledge of a real object external to it and is not simply knowledge of ideas which are only copies of objects. It is one of the advantages of the Nyāya conception of relation being wholly external that the Naiyāyikas can account for cognition without the mediation of ideas as idealists and subjectivists find it necessary to do. So, in Nyāya epistemology, it may be said that the Naiyāyika has no difficulty in solving the problem of knowledge, the term knowledge being understood as cognition of objective reality, while there is real difficulty in accounting for the difference between truth and error, or valid cognition and erroneous cognition, consistently with the realistic standpoint of Nyāya metaphysics, not to speak of the difficulties involved in the Nyāya theory of external relation. In a valid cognition like 'this is silver' (*idam rajatam*), where silver is seen correctly as silver, the Naiyāyika contends that its objective content exactly corresponds to the external realities represented by the attribute 'silverness', the thing possessing that attribute, *viz.*, silver, and their relation of inherence (*samavāya*). It should be remembered here that according to Nyāya epistemology, the objective content of a cognition is not contained in cognition but exists outside it and it is called 'content'

only in the sense that the relation of object and subject (*viṣaya* and *viṣayin*) connects it with *jñāna*. In a valid cognition, the exact correspondence between *jñāna* and *jñeya*, as already explained, consists in the correct correlation of the phases of *viṣayaviṣayibhāva*, *viz.*, adjunctness (*prakāratā*), substantiveness (*viśeṣyatā*) and relationness (*saṁsargatā*). In an erroneous cognition like 'this is silver' (*idam rajatam*), where nacre (*śu ti*=mother of pearl) is mistaken for silver, the objective content does not exactly correspond to the external realities represented by silverness, silver and their relation; and the lack of correspondence in such cases is due to a wrong correlation of the phases of *viṣayaviṣayibhāva*, the adjunctness (*prakāratā*) of the real silverness which belongs to the real silver existing elsewhere being erroneously correlated with the substantiveness (*viśeṣyatā*) which belongs to the nacre presented as *idam* (this). Thus, a careful analysis of the Nyāya definition of *pramā* and *bhrama* would make it clear that the Naiyāyikas are prepared to regard *truth* and *error* as consisting in correspondence and lack of correspondence with objective reality.

The Nyāya theory of *bhrama* is known as *anyathākhyātivāda* or the theory which explains erroneous cognition as misapprehension of one thing as another thing. In the phrase *anyathākhyāti*, the term *khyāti* means 'cognition' and *anyathā* means 'otherwise than what it is'. When nacre is wrongly seen as silver, the erroneous cognition that arises takes the form 'this is silver' (*idam rajatam*). Here, 'this' stands for nacre

lying in front of the knower; and it is first seen as a white piece and not as nacre, the distinctive feature of nacre being missed either through some defect in sight or in the particular situation in which the visual perception arises. The visual perception of nacre as 'this' (*idam*) arises in the ordinary way, through *laukika-sannikarṣa* or through the normal sense-relation of contact between the sense and the object seen. The real silverness (*rajatatva*), which belongs to the real silver existing elsewhere, is presented in this visual perception as the attribute of nacre seen as *'idam'* in a general form; neither the real *rajata* nor the real *rajatatva* could be said to be connected with the sense of sight through normal sense-relation (*laukikasanni-karṣa*); and without *sannikarṣa* (sense-relation) being established between the sense-organ concerned and the object to be perceived, perception cannot arise. So, the Naiyāyikas hold that the real silver and silverness come to be connected with the sense of sight through an extra-normal type of sense-relation (*alaukikasanni-karṣa*) which is called *jñānalakṣaṇapratyāsatti* (sense-relation represented by cognition). The details relating to the different kinds of extra-normal sense-relation causing extra-normal perception will be fully explained under section 30, *infra*. In the present instance of erroneous cognition, features like white colour and brightness, which nacre possesses in common with silver, are noticed; they remind the knower of the real silver and silverness which he might have seen elsewhere; and the recollection (*smṛti*) of the real silverness (*rajatatva*) constitutes the exta-normal relation

represented by cognition (*jñānalakṣaṇapratyāsatti*), which brings silverness within the scope of the visual sense seeing nacre as 'this' (*idam*) in the ordinary way. Thus, according to the Naiyāyikas, the visual misapprehension of nacre as silver is an extra-normal variety of visual perception (*alaukikacākṣuṣa*). It may be noted here that the proposition 'One thing is mistaken for another' (*anyat anyathā gṛhyate*), which brings out the meaning of the technical phrase *anyathākhyāti*, is interpreted in two ways in Nyāya literature. The earlier Naiyāyikas like Vācaspatimiśra would take this proposition to mean 'One reality is mistaken for another reality' (*sadantaram sadantarātmanā gṛhyate*); while later Naiyāyikas like Gaṅgeśopādhyāya would take it to mean, 'A real object which does not have a certain attribute is mistaken in an extra-normal perception as having that attribute, which exists elsewhere' (*tadabhāvavat vastu tadvat jñāyate*).

Students of Nyāya epistemology cannot adequately estimate the philosophical value of the Nyāya theory of *anyathākhyāti* without comparing it to some extent with the theories of *bhrama* (*khyātivāda*) propounded by the other schools of Indian philosophy. There are five theories of *bhrama*; *viz.*, the theory of *self-apprehension* (*ātmakhyāti*), the theory of *non-being's apprehension* (*asatkhyāti*), the theory of *non-apprehension* (*akhyāti*), the theory of *misapprehension* (*anyathākhyāti*), and the theory of *indefinable's apprehension* (*anirvacanīyakhyāti*). The Yogācāra school of Buddhism, otherwise known as the Vijñānavāda school, explains erroneous cognition as consisting in the 'self'

which is identical with consciousness, externalising itself in the form of objects like silver; all determinate cognitions of objects, according to the Yogācāra subjectivists, are erroneous; this theory of *bhrama* is called *ātmakhyātivāda* (theory of *self-apprehension*). The nihilistic school of Buddhists, otherwise known as the Mādhyamaka school, explains *bhrama* as consisting in the cognition of a *non-being* (*asat*); in the case of the erroneous cognition 'this is silver' which arises where there is no silver, the object of the cognition is a non-being (*asat*); on the strength of experience, even non-being should be taken to admit of being cognized; this theory of *bhrama* is known as *asatkhyātivāda*. The Prābhākara school of Mīmāṁsakas explains all cases of *bhrama* as cases of *non-apprehension*. They contend that, in the cognition of silver where only nacre is seen, two cognitions arise in fact, one cognition being the perception of nacre in a general way as *this* (*idam*) and not as possessing the distinctive feature of nacreness, and the other cognition being the recollection of silver previously cognized elsewhere. The recollection of silver in this case is not identified by the knower as recollection, but is cognized by him merely as cognition, since the object of recollection—*viz.*, silver is thought of merely as silver, stripped of its association with past time and the particular place where it was seen. The Prābhākaras describe such recollection by the phrase *pramuṣṭatattākasmaraṇa* or 'recollection of an object robbed of its *that-ness*.' In certain other cases of *bhrama* like 'the conch is yellow' (*pītaḥ*

śaṅkhaḥ), the Prābhākara theorist explains that two imperfect perceptions arise, one being the visual perception of a conch as such, its real colour being missed, and the other being the visual perception of the yellow colour of the bilious matter which causes jaundice (*pittadravyapītimā*), the relation of the yellow colour to the bilious substance being missed. Thus in all cases of *bhrama*, two distinct cognitions—either a perception and a recollection or two perceptions—arise; their distinction is missed; and the difference between objects comes to be missed for the time being; as a result of such non-discrimination, volitional decision (*pravṛtti* or *yatna*) leading to voluntary activity arises; a voluntary activity with a view to seizing the object of *bhrama*, such as silver, folows; the knower in such cases, acting on his knowledge, realises through his experience that his activity has become futile, as he finds only nacre on the particular spot and no silver at all; and in those cases, in view of the fact that the volitional decision (*pravṛtti*) of the knower concerned leads to a futile activity, the cognitive antecedent of such a futile *pravṛtti* is technically called *bhrama*. It will be seen that, while the Prābhākaras are prepared to give a place to the term *bhrama* in their vocabulary, they maintain that all experiences are valid (*anubhūtiḥ pramā*) and that the so-called cases of *bhrama* are only undiscriminated jumbles of cognitions whose objects also happen to be undiscriminated for the time being (*jñānayoḥ viṣayayośca vivekāgrahāt bhramaḥ*). In other words, according to the Prābhākaras, to experience is to experience validly and to err in experience is to experi-

ence imperfectly, though validly, the imperfection consisting merely in non-discrimination and not in misapprehension. The Nyāya theory of *anyathākhyāti* has already been explained. The Bhāṭṭas, for all practical purposes, adopt the Nyāya theory of *bhrama*, with this difference—that they describe a *bhrama* as *viparītakhyāti* or contrary experience; that they do not account for *bhrama* through extra-normal sense-relation; and that the relation (*saṁsarga*) between nacre and silverness (*rajatatva*) or '*idam* and *rajatam*' ('this' and 'silver'), in the case of the misapprehension of nacre as silver, is a non-being (*asat*). Among the Vedāntins, those of the dualistic school (*dvaitinaḥ*) maintain what they call their own version of *anyathākhyāti* and contend that, in cases of erroneous experience like *śuktirajatabhrama*, the silver which is presented in *bhrama* is non-being out-and-out (*atyantāsat*) within the sphere of nacre, though it is real elsewhere; and the chief argument in support of this view is that the sublating cognition (*bādhakapratīti*), which arises later takes the form—"There was no silver at all here in the past; it is not here now; and it will never be here in the future" (*nātra rajatam āsīt, asti, bhaviṣyati*), and it totally denies the existence of silver within the sphere of nacre in the past, the present and the future. The Vedāntins of the Viśiṣṭādvaita school adopt the Prābhākara theory of *akhyāti* with certain modifications and their version of *akhyāti* is known as '*non-apprehension cum apprehension of reality*' (*akhyātisaṁvalita-satkhyāti*). Śrī Rāmānuja and his followers hold that the object of *bhrama* is

always real and there is strictly speaking no invalid cognition at all. In the perception of nacre as silver, it is the silver which is included among the component parts of nacre that is seen. They assume that substances which are similar must have some component parts in common, that silver is made up of parts of nacre and parts of silver and is called silver because the constituent parts represented by silver predominate; that in the constitution of nacre, likewise, the predominating part is represented by nacre and there is a small portion of silver; and that this small portion of silver it is, that happens to be seen when nacre is seen as silver. Thus according to the school of Śrī Rāmānuja, a person who errs in cognition really blunders into a subtle truth which, under normal conditions, is missed or ignored.

A critical student of Indian philosophy would find reason to be dissatisfied with every one of these theories of *bhrama*. The non-existent or non-being (*asat*) is an absolute zero and cannot be persented in any experience, though the Mādhyamakas insist that we are helpless in the matter and have to recognize the possibility of *asat* being presented in experience on the strength of experience itself. The Yogācāra idealist endeavours to improve upon the nothingistic explanation of the Mādhyamakas by saying that consciousness comprises its configuration (*sākāram vijñānam*), and in its externalised form, it is presented in itself as its object. But one can easily see that this explanation involves a number of inconsistencies. The Nyāya realist realizes that nothing but reality (*sat*) admits of being

presented in experience; he explains that error consists in confounding one reality with another reality and complicates his theory by trying to bring the absent reality within the range of the sense-organ concerned through the extra-normal relation (*alaukikasannikarṣa*) represented by some form of cognition itself (*jñānalakṣaṇapratyāsatti*). The Bhāṭṭa realists, while adopting the theory of *anyathākhyāti*, find it necessary to accommodate themselves to the *asatkhyāti* theory, in holding that the *saṁsarga* element in the apprehension of nacre as silver and in such other cases is a non-being (*asat*). The Prābhākara realist sees the danger of compromise with the *asatkhyāti* on the one side, and on the other side, sees how the Nyāya theory that one reality is presented as another reality (*sadantaraṁ sadantarātmanā gṛhyate*) would inevitably reduce itself to a variety of *asatkhyāti* for the obvious reason that one reality never exists (is *asat*) in the form of another reality. In order to avoid these difficulties the Prābhākara realist adopts the extreme theory of *akhyāti*. Though this is the only theory which could be said to be perfectly consistent with realism, it is not adequate to account for the volitional decision (*pravṛtti*) and the further activity that follows a *bhrama*. As Vācaspatimiśra points out in his *Tātparyaṭīkā* and *Bhāmatī*, (in the *akhyātivāda*) one could find as much justification in non-identification (*abhedāgrāha*), for the two cognitions in cases of *bhrama* appearing as two cognitive units and consequently for the two objects in such cases appearing as different, as in non-discrimination (*bhedāgrāha*), for the two

cognitions and their two objects in such cases appearing as one and the same; and as a result, if there should be volitional decision in the direction of activity on the latter ground, there should be volitional decision in the opposite direction of abstention on the former ground and the knower should hang between *pravṛtti* and *nivṛtti*. These difficulties, the Advaitins endeavour to meet by propounding the theory of *anirvacanīyakhyāti* and explaining *bhrama* as experience of a relatively real object, which is neither absolute being (*sat*), nor absolute non-being (*asat*), nor both. According to the Advaitins, when nacre is seen as silver, for instance, what happens is this:—over the real substratum (*adhiṣṭhāna*) represented by a nacre, or more correctly, nacre-delimited spirit (*śuktyavacchinnacaitanya*) the beginningless positive mist of nescience (*anādibhāva-rūpājñāna*) happens to be thrown; when the sense of sight comes into relation with nacre in a general way, the mist is partly dispelled by the cognitive modification of *antaḥkaraṇa* which takes the form 'this' (*idamā-kāravṛtti*); the mist of nescience, however, continues to veil the nacreness of what is seen as this (*idam*) and, reinforced by the prepossessions of the knower's mind and by the similarity between the object seen as 'this' and silver, undergoes transformation, with the result that silver comes into being also with the cognition of silver, which is but a cognitive modification of nescience (*śuktyavacchinnacaitanyādhiṣṭhitāvidyā rajatarūpeṇa rajatākāravṛttirūpeṇa ca pariṇamate*); silver which thus comes into being has relative reality; it is said to be *anirvacanīya* in the sense that it does not

admit of being definitely described as *sat* (being), or *asat* (non-being) or both; and it is also said to be *prātibhāsika* in the sense that it is coterminous with its presentation in cognition. It will thus be seen that the Advaitin's theory of *bhrama* regards it as a cognitive complex consisting of two cognitive factors, one of them being a *vṛtti* of *antaḥkaraṇa* and the other being a *vṛtti* of *avidyā*. According to this theory, the object of a *bhrama* is real in a relative sense and comes into being along with the *bhrama* and lasts as long as the *bhrama* lasts; and there is no need for accommodation to *asatkhyāti* or for any complication in the form of extra-normal (*alaukika*) sense-relation. That the Advaitins have no particular animus against the advocates of *anyathākhyātivāda* is evident from the way in which they are readily willing to accept the explanation of *anyathākhyāti* in the case of what is known as *sopādhikabhrama*, where the object of *bhrama* happens to be within the normal scope of the sense-organ, as, for instance in the erroneous perception of a crystal (*sphaṭika*) as red-coloured when a *japā* (China rose) is seen to be in its vicinity. Such students of Indian philosophy as are capable of critically reviewing the five 'theories' of *bhrama* (*khyātivāda*) set forth here would not find it difficult to conceive of an appropriate graph by means of which the epistemological inter-relation of these theories may be exhibited and comprehended. If one could imagine that epistemological thought starts with *asatkhyāti* as centre and, in its endeavour to escape from it, swings forcibly between the two diametrical termini of *anyathākhyāti* and

akhyāti, it would not be difficult to imagine that such thought inevitably describes a comprehensive epistemological circle in the form of *anirvacanīyakhyāti*, which easily accommodates itself to *akhyāti* in respect of the non-discrimination of the two *vṛttis* constituting a *bhrama* and to *anyathākhyāti* by complete surrender in the case of *sopādhikabhrama*.

It would be quite appropriate to consider here the Nyāya view regarding the way in which the validity and invalidity of a cognition, or truth and error, or *prāmāṇya* and *aprāmāṇya* have to be accounted for and ascertained. The Naiyāyikas hold that validity and invalidity of cognitions are made out through extrinsic considerations and are brought about by extrinsic circumstances. In other words, according to the Naiyāyikas, validity and invalidity cannot be said to be intrinsically made out (*svatogrāhya*) or intrinsically brought about (*svatojanya*). Intrinsicality (*svatastva*) in respect of the knowledge of reality consists in reality being made out by every means by which the cognition having it is ascertained but not ascertained to be invalid. This definition of *svatogrāhyatva* is expressed thus in the technical language of Nyāya:—"*prāmāṇyasya jñaptau svatastvam tadaprāmāṇyāgrāhakayāvajjñānagrāhakasāmagrīgrāhyatvam.*" Whenever a person knows that he cognizes and does not know for the moment that he errs, he also knows that he validly cognizes:—this is the contention of the advocates of *svatogrāhyatva* or the theory that validity is intrinsically made out. Thus, if a person could become aware of the existence of a cognition in him in a hundred ways

without becoming aware that that cognition is erroneous and in any one of those cases he becomes aware of the cognition only without becoming aware of its validity, the definition of *svatogrāhyatva* would not hold good and the view that validity is made out extrinsically (*paratogrāhya*) has inevitably to be accepted. The Naiyāyikas explain their position thus in regard to this question. A determinate cognition like "this is silver" (*idam rajatam*) is called *vyavasāya* and it is presented first in the *anuvyavasāya* (after-cognition or consciousness of a cognition) which takes a form like this—"I cognize this silver" (*idam rajatam jānāmi*), and in this *anuvyavasāya*, the validity of the cognition referred to is not presented. If such *anuvyavasāya* were to invariably take cognizance of the validity of such *vyavasāya*, it would not be possible to account for the doubt which an inexperienced person feels regarding the validity of such *vyavasāya*. So, in such cases, the validity of the *vyavasāya* "this is silver" should be ascertained through the practical result to which it leads. If the voluntary decision and activity following such *vyavasāya* should turn out to be fruitful and if the knower should actually find himself in a position to get the silver which he wanted, such *vyavasāya* (cognition) is recognized to be valid. The process of inference through which one's mind may pass in such cases is usually put in this form: "This cognition is valid, because it leads to a fruitful effort; any cognition that leads to a fruitful effort is valid, as another valid cognition already realized to be such in experience, (*idam jñānam pramā; saphalapravṛttijanakatvāt; yadyat saphala-*

pravṛttijanakam tat jñānam pramā; yathā pramāntaram). It should be borne in mind, in this connection, that causing fruitful effort is, according to Nyāya the ground of inferring validity, while validity itself consists in the cognition in question cognizing a thing as possessing an attribute which it really has. In that the Naiyāyikas make the ascertainment of the truth of a cognition dependent upon its agreement with its expected workings or, in other words, with the consequences which are expected to arise from it in the experience of the active subject, their view would appear to be closely similar to that of the modern pragmatist. However, they do not lose sight of the fact that pragmatism is only a method of ascertaining truth, that this method itself presupposes *truth* whose nature has to be explained independently of agreement with practical workings and that, if the truth presupposed by the pragmatic argument were itself to be ascertained pragmatically, through inference, the fault of *regressus ad infinitum* would inevitably follow. Having due regard to such difficulties, the Naiyāyikas define truth as consisting in correspondence with reality and thus combine their pragmatic theory with a theory which has much in common with what is known as the correspondence notion of truth in western philosophical literature. The Nyāya definition of validity (*pramātva*) makes it clear that truth consists in correspondence with reality. The Nayiyāyikas also point out that, only in cases where a cognition leads to effort in practical experience or it happens to be *pravartaka,* it becomes necessary to ascertain the validity of such cognition in order to

ensure unfaltering effort (*niṣkampapravṛtti*) ; and that, on the first occasion of halting effort (*sakampapravṛtti*), it is not necessary that the cognition leading to such effort should have been definitely made out to be valid and it would do if such cognition should not have been definitely ascertained to be invalid. It can be easily seen from this that there is no room for any fear of *anavasthā* (endless regression) or *ātmāśraya* (self-dependence) in the pragmatic method of inferring truth as employed by the Naiyāyikas. In respect of the question how validity and invalidity are brought about, the Nyāya theory is that they are brought about by certain extrinsic circumstances which, for the sake of convenience, are called *guṇas* (good features) and *doṣas* (defects) ; in other words the Nyāya theorists maintain *paratastva* (extrinsicality) in respect of the *utpatti* (production) of validity and invalidity of a cognition as well as in respect of their *jñapti* (knowledge). For instance the validity of a perception is secured by the good feature (*guṇa*) consisting in the adequacy of the contact between the sense-organ concerned and its object; and its invalidity is the result of defects such as distance and some disease affecting the sense-organ.

It would be interesting to contrast the Nyāya theory of truth and error with the epistemological theories put forward by other schools of Indian philosophy about truth and error. The Sāṁkhyas maintain that both validity and invalidity are intrinsically made out in the sense that it is by virtue of the reflection or proximity of the same *cit* (self-luminious conscious-

ness), that the existence of a cognitive *vṛtti* and its validity or invalidity are illuminated. Prābhākaras make no difference between *vyavasāya* and *anuvyavasāya* and maintain that, in every cognition, the knower, the known object, and knowledge itself, along with its validity, are presented. They advocate the theory of intrinsicality (*svatastvapakṣa*), in so far as validity (*pramātva*) is concerned; and there is no question of error (*apramātva*) in their theory, since they maintain that all experiences are valid (*anubhūtiḥ pramā*). The Bhāṭṭas contend that cognition is to be inferred through its effect, called *jñātatā* or *prākaṭya*, which consists in what some of them describe as a temporary luminosity (*prakāśa*) arising in known objects and referred to in propositions like 'this is known' (*ayaṁ jñātaḥ*); and that in such inference the cognition which has caused *jñātatā*, and its validity are presented. The validity which is thus intrinsically made out may be stultified by a subsequent sublating cognition; and thus, in the Bhāṭṭa theory, invalidity (*apramātva*) is extrinsically made out. The Bhāṭṭas are, therefore, to be taken to advocate *svatastva* in the case of validity and *paratastva* in the case of invalidity. Murārimiśra, who does not go the whole hog either as a Prābhākara or as a Bhāṭṭa, but who is undoubtedly a Mīmāṁsaka, recognizes, like a Naiyāyika, that a cognition (*vyavasāya*) is cognized by its after-cognition (*anuvyavasāya*), but maintains, unlike a Naiyāyika, that the validity of *vyavasāya* is also presented in the same *anuvyavasāya*. It will thus be seen that Murārimiśra is an advocate of the theory of the intrinsicality of validity (*pramā-*

tvam svato gṛhyate). The Bauddhas, on the other hand, hold that all determinate knowledge (*savikalpaka*), in so far as one is conscious of it, is erroneous (*apramā*) and its *apramātva* is intrinsically made out; while, through inference, the validity (*pramātva*) of indeterminate cognition (*nirvikalpaka*) is extrinsically made out. The Buddhists thus advocate the theory of extrinsicality (*paratastvapakṣa*) in regard to validity and intrinsicality (*svatastvapakṣa*) in regard to invalidity. According to the Advaitins, the validity of a cognition is intrinsically made out in the sense that the witnessing inner spirit (*sākṣicaitanya*), which illuminates the valid cognitive *vṛtti*, also illuminates its validity (*pramātva*); and the invalidity (*apramātva*) of a cognitive *vṛtti* is inferred extrinsically, through the resultant effort becoming futile. In order to evaluate adequately the different theories of *pramātva* and *apramātva* set forth here, it is necessary to note that the Naiyāyikas would answer in the affirmative, the question—'Is error possible in realism?'—and would explain the possibility of error by showing how a real substantive (*viśeṣya*) and a real attribute (*prakāra*) may be erroneously correlated when they are presented in cognition and thus save realism itself from being ruined by conceding the possibility of error. The Prābhākara realists think that any concession of the possibility of error (*bhrama*) would spell the ruin of realism and insist that all experiences are valid (*anubhūtiḥ pramā*) and that the so-called *bhramas* involve an element of non-discrimination (*aviveka*). The Bhāṭṭa realists adopt the *anyathākhyāti* of Nyāya

with suitable modifications; and in order to preserve realism effectively, they would make the knowledge of cognition (*jñāna*) dependent upon the knownness (*jñātatā*) of the object (*jñeya*) and thus provide an effective counterblast to idealism which seeks to merge all *jñeya* in *jñāna*. The Buddhist idealist rules out truth and considers all determinate knowledge (*savikalpaka*) erroneous. The advocates of the theory of intrinsicality of validity (*prāmāṇyasvatastvavādinaḥ*), more especially the Bhāṭṭas and the Advaitins, would generally emphasise the ideas that, in a valid cognition, the object is not stultified by a subsequent sublating cognition and is not merely re-exhibited through a reminiscent impression, the former of these two features being stressed in particular; and this way of looking at *pramātva* would be quite in accord with the view that *apramātva* is made out extrinsically and *pramātva* intrinsically. It may also be noted, with advantage, that, in the Nyāya theory, *anuvyavasāya* (the subject-centred after-cognition) is regarded as self-luminous (*svaprakāśa*) in the sense that it reveals itself along with the *vyavasāya* (the object-centred cognition in which the knower and knowledge are not presented); and that, in this respect, the Nyāya realist seeks to combine in a way his objectivism with an aspect of subjectivistic thought which is not incompatible with his realism. In this kind of compromise, a danger is lurking, as students of Advaita may easily see, and this danger consists in the manner in which the Nyāya view lends itself to *anuvyavasāya* being treated as a fragmentary appearance of the absolute

reality represented by the absolute, self-luminous consciousness called *cit*.

An intelligent attempt to review synthetically all the theories of *bhrama* known to Indian philosophy will bring to light the fact that, in some manner or other, a negative element is involved in every one of the five *khyātivādas* (theories explaining the nature of *bhrama*). In the *asatkhyāti* doctrine, the negative element is obvious; and in *ātmakhyāti* doctrine, it is obvious in so far as objective externality is concerned. In the *anyathākhyāti* view, the negative element is to be found in the *saṁsarga* part or in the idea that one reality is presented as another reality which it is not or that a real substantive is presented as having a real attribute which it has not; and in the *akhyāti* doctrine, one can easily detect the negative element in the idea of non-discrimination (*aviveka*). The *anirvacanīyakhyāti* doctrine appears on the surface to eschew the negative element from the conception of *bhrama*; but, in fact, the negative element is replaced by *relativity* which implies a negative element and transfers the negative element from the side of object to the side of definite predications (*nirvacana*) with reference to the object. A careful investigation of the Advaitin's *anirvacanīya-khyāti*, as compared with the other theories of *bhrama*, would lead to the mystery of *error* being unravelled through the disentanglement of *negativity*, which is the inner core of *bhrama*. But this would not amount to all the theories of *bhrama* being reduced to the level of *asatkhyāti*; for, it should be remembered that *negativity* is only the other side of *relativity* and an aspect of

reality. If one might be permitted here to indulge for a while in epigrammatising, one might well say that *yes* (*sat*) and *no* (*asat*) are the fulcra of all epistemology as they are of all metaphysics; that *yes* and *no* are but phases of the same reality; that all appearances are the offspring of a cross between *yes* and *no*; that it will be evident through the gemination of *yes* and *no*, that *yes* is *no* and *no* is *yes*; and that error (*bhrama*) is the antechamber of truth (*pramā*).

In subsections (f) and (g) of section 28 of the text, valid experience (*pramā*) and its instrument are each divided into four kinds. The term *pramāṇa* is used in this section in the sense of the efficient special cause or instrument (*karaṇa*) of valid experience. The word *pramāṇa* is sometimes used in the sense of valid experience (*pramā*), as for instance in the proposition '*idam rajatam iti jñānam pramā*' (this is siver—this is valid experience). In the word *pramāṇa*, the suffix *ana* denotes an instrument in the former case; and in the latter case, it denotes *bhāva* (the meaning of the root itself). The Indian materialists, called Cārvākas, recognize only one *pramāṇa*, *viz.*, perception: the Bauddhas and the Vaiśeṣikas recognize two *pramāṇas*, *viz.*, perception and inference; the Sāṁkhyas recognize three, *viz.*, perception, inference and verbal testimony; the Naiyāyikas recognize four, *viz.*, perception, inference, assimilation and verbal testimony; the Prābhākaras recognize five, *viz.*, the above four *pramāṇas* and presumptive testimony (*arthāpatti*); the Bhāṭṭas and Advaitins recognize these five *pramāṇas* and non-cognition (*anupalabdhi*) as the sixth *pramāṇa*;

and the Paurāṇikas recognise these six *pramāṇas* and, in addition, recognize necessary inclusion (*sambhava*) and traditional hearsay (*aitihya*) as the seventh and the eight *pramāṇa*. The leading exponents of Indian philosophy are unanimous in discarding the last two, *sambhava* and *aitihya*; the reason is obvious; the former which enables one, for instance, to be sure of *fifty* when *hundred* are guaranteed is nothing more than a plain case of immediate inference; and the latter, which consists in traditional hearsay like 'a spirit dwells in this banyan tree' (*iha vaṭe yakṣastiṣṭhati*), is no *pramāṇa* at all until it is verified, and when verified, it comes under verbal testimony. The arguments advanced by Cārvākas to reject even *anumāna* and the grounds on which the Vaiśeṣikas and Bauddhas would bring *upamāna* (comparison or assimilation) and *śabda* (verbal testimony) under inference will be considered under appropriate heads in chapters II, III and IV, *infra*. The Naiyāyikas would bring presumptive testimony (*arthāpatti*) under *anumāna* (inference), and in some cases, under *śabda* (verbal testimony). A reference to pages 44 to 47 *supra* would show how the Naiyāyikas and Prābhākaras discard *anupalabdhi* (non-cognition) as a distinct *pramāṇa* and how the former reduce it to the level of a necessary acessory to *pratyakṣa*, in perceiving non-existence (*abhāva*). From chapter III it will be seen that the Nyāya view of *upamāna* is different in several respects from the Mīmāṁsaka's view of that *pramāṇa*.

It would be useful to consider here how the chief champions of *arthāpatti*, the Bhāṭṭas and Prābhākaras,

maintain that it is a distinct *pramāṇa* and should not be brought under *anumāna* or *śabda* and on what grounds the Naiyāyikas refuse to recognize it as a distinct *prāmaṇa*. According to the Bhāṭṭas, a knowledge of some fact which is unaccountable otherwise than by presumptively granting another fact is the instrument in the case of *arthāpatti* and the knowledge presumptively arrived at of the explanatory fact is the resultant cognition (*upapādyajñānam karaṇam, upapādakajñānam phalam*). For instance, Devadatta is alive and not present in his house; this fact has to be accounted for (*upapādya*), and cannot be accounted for otherwise than by presumptively granting that he must be present in some place outside his house *bahissadbhāvakalpanam vinā nopapadyate*). In the Bhāṭṭa view, the etymology of the word *arthāpatti* should be explained in two ways according as the word is taken in the sense of the instrumental cognition (*karaṇībhūtajñāna*) or resultant cognition (*phalībhūtajñāna*). In the former case, the word is to be explained as denoting the knowledge of the fact which has to be accounted for and is otherwise unaccountable—the knowledge through which the needed explanatory fact is presumptively arrived at (*arthasya upapādakasya kalpanā yasyāḥ anyathānupapannasya upapādyasya pratīteḥ sā*). In the latter case, the word denotes the presumptive knowledge of the required explanatory circumstance (*arthasya upapādakasya kalpanā*). The Bhāṭṭas define *arthāpatti* to be a *pramāṇa* which consists in such a conflict between two valid cognitions, of which one takes a general form and the other takes a specific form

of a conflicting character, as necessarily leads to the *presumptive* knowledge of a fact which removes the conflict. One of the stock examples given by them may be set forth thus:—It is known for certain that Caitra is alive; he must be present in some particular place; he is not present in his house; so, he is *presumably* present elsewhere. That Caitra is alive and present in some particular place is an established fact which is presented in the valid cognition taking a general form (*sādhāraṇa-pramāṇa*). That he is not present in his house is also an established fact which is presented in the valid cognition taking a specific form (*asādhāraṇapramāṇa*). The conflict between these two *pramāṇas* is not of the nature of the irreconcilable conflict which one notices between two contradictories; but it is of the nature of the conflict between a general affirmation and specific exclusion or between a general rule and an exception (*sāmānya* and *viśeṣa*). The Naiyāyikas contend that, in such cases, there is no real conflict at all since both the general affirmation and the specific exclusion may be true. The Bhāṭṭas point out in reply that conflict need not always be thoroughgoing as in the case of two contradictories, and that partial conflict is quite conceivable. In instances like the one cited above, there is real conflict, though of a partial nature and there is a stage in the process of thought, at which the validity of the general affirmation is about to be completely imperilled. Caitra is alive and must be present somewhere; he is not present in his house; between this stage in thought and the final stage of presuming Caitra's presence out-

side his house, the truth of the pre-established fact of his being alive stands imperilled; thus, just at this intervening stage, there is the possibility of the knowledge that Caitra is alive being falsified; and the knower's conviction that this knowledge is true induces him to presume that Caitra is present outside his house and to prevent the possibility of falsification from becoming actualised. The Bhāṭṭas maintain in this manner that *arthāpatti*, as an instrument of valid cognition, is represented by a kind of conflict between a *sādhāraṇapramāṇa* and *asādhāraṇapramāṇa* (a valid cognition in the form of a general affirmation and a valid cognition in the form of a specific denial or exclusion), and that the resultant *pramā* arising from a consciousness of such a conflict is a *presumptive* type of knowledge. If the essential element in *arthāpatti* is that a certain fact like Caitra's being alive and not being present in his house is unaccountable without presuming another fact like Caitra's being outside his house, could not *arthāpatti* be reduced to inference based on negative concomitance (*vyatirekyanumāna*)? This is what the Naiyāyikas ask. To get over this difficulty and to prevent *arthāpatti* being reduced to *anumāna*, the Prābhākaras urge that, in the example above referred to, it is not the possible falsification of the knowledge of Caitra being alive that constitutes the *pramāṇa* called *arthāpatti*; but it is the doubt regarding Caitra being alive (*jīvanasaṁśaya*), which arises from the conflict indicated above, that serves as the means of the resultant cognition which consists in the presumptive knowledge of Caitra being outside his house

(*bahissattvakalpanā*). While the strong point in the Prābhākara view of *arthāpatti* is that by treating *doubt* as the means of *presumption*, the *pramāṇa* in question is redeemed from the grip of *anumāna*, the weak spot in that view is that it exalts *doubt* to the rank of a *pramāṇa*; but the Prābhākaras, who hold that all experience is valid, would be quite willing to take this criticism as a compliment. The Bhāṭṭas meet the difficulty raised by the Naiyāyikas, by pointing out that the fundamental element in the mental process involved in *arthāpatti* is *presumption* through negative concomitance (*vyatirekavyāpti*) while the fundamental element in the mental process called *anumāna* is *subsumption* under positive concomitance (*anvayavyāpti*); and that presumptive knowledge is cognition of a distinct type belonging more to the side of imagination than to inference—belonging more to the sphere of *hypothesis* than to the sphere of inferentially established *thesis*, and it is articulated through propositions like 'I presume' and not through propositions like 'I infer'. The Bhāṭṭas do not approve of the way in which the Prābhākaras have exalted *doubt* in this connection to the rank of a *pramāṇa*. It is also pointed out by the Bhāṭṭas that there are certain cases of presumptive knowledge which do not admit of being reduced to inference. For instance, Devadatta is known to be present in the third house from mine; it is presumed that he is not present in *any other house*; this presumptive knowledge refuses to be reduced to inference; it would not be a sound argument to say that any place other than the third house from mine is not a place

Devadatta is, on the ground that such a place happens to be different from the third house from mine and on the analogy of the second house from mine; for with equal force it might be argued that any place other than the three houses which have come within the scope of my observation is the place where Devadatta is present, on the ground that such a place is different from the two houses adjacent to the third house in which he is present and on the analogy of that third house. The Naiyāyikas would, however, explain their attitude in the matter by pointing out that, where one has to rely exclusively on negative concomitance (*vyatirekavyāpti*) one's mind has to pass inevitably through a stage of positive concomitance (*anvayavyāpti*) before it arrives at the resultant cognition; that presumptive knowledge (*kalpanā*) is really the anticipatory forestalling by the imaginative side of one's mind of what its somewhat slower ratiocinative side arrives at through inference; and that such foreshadowings through negative concomitance (*vyatirekavyāpti*) may well be brought under *anumāna* as a distinct variety of it and need not be exalted to the rank of a distinct *pramāṇa*. It should be remembered in this connection that the Bhāṭṭas maintain that what the Naiyāyikas would treat as inference based exclusively on negative examples and negative concomitance (*kevalavyatirekyanumāna*) is really no inference at all and demands a distinct place as *pramāṇa*, since it lacks the essential feature of inference—*viz.*, direct subsumption to positive concomitance. The Bhāṭṭas realize the danger that this

way of merging *vyatirekin* in *arthāpatti* may lead to the entire province of *anumāna* being swallowed up by the latter; and this fear they remove, by drawing attention to the fact that the inference of fire in a mountain from smoke, for instance, through the concomitance of fire and smoke in all observed cases, may be reduced to *arthāpatti*, and that the universal concomitance of all smokes and all fires, including the few observed and many unobserved cases, is a clear case of inference which cannot be accounted for by any *pramāṇa* other than *anumāna*. The Bhāṭṭas speak of two kinds of *arthāpatti*, *śrutārthāpatti* and *dṛṣṭārthāpatti*, according as the *upapādya* (the fact requiring explanation) is made out through perception or through verbal testimony.

In section 28 of the text, four kinds of *pramāṇas* are referred to by Annambhaṭṭa. A *pramāṇa* is a *karaṇa* of a valid cognition (*pramā*). The concept of *karaṇa* has to be elucidated. The author proceeds to define *karaṇa* in section 29 (a) and this leads on to a detailed consideration of the Nyāya view of causation.

29

T—(*a*) *Karaṇa* (efficient or instrumental cause) is a *special* cause.

(*b*)—The invariable antecedent of an effect is its cause.

(*c*)—An effect is the counter-correlative of its antecedent non-existence.

(*d*)—Cause is of three kinds, the three varieties being *inherent* cause, *non-inherent* cause, and *occasioning* cause.

(*e*)—That is called *inherent* cause, in which the effect *inheres* when it is produced. For instance, threads are the *inherent* cause of a cloth, and a cloth of its colour and such other qualities.

(*f*)—That is called *non-inherent* cause, which serves as a cause, while co-inhering with its effect, or with the inherent cause of its effect. For instance, contact between threads is the *non-inherent* cause of cloth; and the colour of the threads is the non-inherent cause of the colour of the cloth.

(*g*)—*Occasioning* cause is a cause not coming under either of the above-mentioned kinds. For instance, the shuttle, the loom and such other things are the occasioning causes of cloth.

(*h*)—Of these three varieties of causes, only that is called

an *efficient* or *instrumental* cause (*karaṇa*), which operates as *special* cause.

Annambhaṭṭa's definition of *karaṇa* uses the phrase *asādhāraṇakāraṇa*. The terms *sādhāraṇa* (general) and *asādhāraṇa* (special) are vague and have to be interpreted in relation to the context in which they are used. In the present context, *sādhāraṇa-kāraṇa* should be understood as a cause which is believed to be the common cause of all the conceivable effects in the world; and in this sense, according to the Nyāya theorists, *God*, *time*, *space* and such other things are general or common causes. *Asādhāraṇakāraṇa* should be understood as a cause which is not common to all the effects but is the special cause of particular effects or classes of effects; and in this sense, the component parts of a pot called *kapāla* (potsherd), the potter's stick and such other antecedents of a pot are its special causes. The Naiyāyikas of the older school would define a *karaṇa* as a *special* and *mediate* cause (*asādhā-raṇakāraṇa*), its mediacy consisting in its causal operation depending upon the co-operation of its intermediate effect in producing its final result. The intermediate factor which a *karaṇa* causes and which, in its turn, co-operates with the *karaṇa* in producing the final result is technically called *vyāpāra*. The term *vyāpāra*, in this restricted sense, should not be confounded with the same term used in the general sense of activity. In the restricted sense of the intermediate accessory of a *karaṇa*, a *vyāpāra* is defined in Sanskrit in this way—*tajjanyaḥ tajjanyajanakaśca vyāpāraḥ*.

(A *vyāpāra* is caused by a *karaṇa*, and in association with it, causes its final effect). The full definition of a *karaṇa*, according to the older Naiyāyikas, is this:—*vyāpāravat asādhāraṇakāraṇam karaṇam*. Annambhaṭṭa considers it expedient to adopt this definition. A potter's stick (*daṇḍa*) is *karaṇa* in the sense that he uses it in revolving his wheel and it causes the pot through the rotation of the wheel (*cakrabhramaṇa*). A sense-organ is *pramākaraṇa* in the sense that in association with its intermediate *vyāpāra*, which consists in its relation with the object (*sannikarṣa*), it produces a valid perception (*pratyakṣapramā*). The Navyanaiyāyikas are not in favour of this definition of *karaṇa*. They would define it as a cause which is felt to be most necessary for having the effect, or for want of which it is believed that the effect is not produced though all the other causes are duly present—(*phalāyogavyavacchinnam kāraṇam karaṇam*). Understood in this way, a potter's stick may be looked upon as *karaṇa*; and likewise the rotation of the potter's wheel or even the contact between the component parts of a pot; in other words, according as the view-point varies, one may refer to an *instrument* or to its intermediate function or even to *asamavāyikāraṇa* as *karaṇa*. The view of the later Naiyāyikas thus agrees with that of the *Vaiyākaraṇas* in respect of *karaṇatva*, the Pāṇinīyan conception of a *karaṇa* being that it is most efficient of all the causes (*sādhakatamam karaṇam*).

The Nyāya theorists define a cause (*kāraṇa*) as an invariable, immediate and indispensable antecedent of an effect. In Sanskrit, the full definition of a *kāraṇa*

is set forth thus:—*kāryaniyatāvyavahitapūrvavṛtti ananyathāsiddham ca kāraṇam*. This definition insists upon three conditions being satisfied before an *antecedent* and a *consequent* could be connected as cause and effect. The antecedent should *immediately* precede the consequent; the two should be invariably co-existent with each other; and the antecedent in question should not be made out to be otherwise than indispensable. Mere co-existence or even invariable co-existence, as in the case of a pot and threads which may be found in the same place, or of earthness (*pṛthivītva*) and smell, is not causality. Immediate sequence is one of the essential elements in causality. The adjunct *ananyathāsiddha*, introduced in the definition of a cause, literally means 'not made out to be otherwise than indispensable'. *Anyathā* means *otherwise*; *siddha* means *made out*; *otherwise*, in the context of causation, means *otherwise than indispensable*; *ananyathāsiddha*, as an adjunct to an antecedent factor, thus means 'not made out to be otherwise than indispensable' or 'not made out to be such as one can do without'. This use of the word *anyathāsiddha* should not be confounded with its use as an adjunct with reference to the result kept in view (*prayojana*). In phrases like *ananyathāsiddham prayojanam*, the result kept in view is described as something which cannot be accomplished otherwise than by particular means. With reference to a cause, *ananyathāsiddha* means, as already explained, an antecedent which is not made out to be otherwise than indispensable. *A* may be seen to be an invariable antecedent of *B*; still, one may be justified in thinking

that it is not indispensable; in that case, *A* should not be regarded as cause of *B*. The Naiyāyikas have made an attempt to classify all the conceivable varieties of dispensable antecedents (*anyathāsiddha*) and usually recognize *five* classes of *dispensable antecedents.* A thing is made out to be invariable antecedent, only as determined by a delimiting adjunct; for instance, thread (*tantu*) is an invariable antecedent of cloth, under the aspect of threadness (*tantutva*); this delimiting adjunct, though it finds a place in a definite conception of the causality referred to, does not participate in the creative process involved in such causality and is therefore felt to be dispensable in the sense that the causal process does not depend upon it; all such delimiting adjuncts of causeness (*kāraṇatāvacchedaka*) form the *first* class of *anyathāsiddha.* Invariable sequence between an antecedent and a consequent is generally made out through a knowledge of invariable concomitance between these two factors and between their negations—in other words, through a knowledge of *anvaya* and *vyatireka*; the colour of thread may be made out to be an invariable antecedent of cloth; but in this case, the *anvaya* and *vyatireka,* with reference to the colour of thread and cloth, cannot be made out independently of the invariable concomitance between thread and cloth on the positive and negative sides; the colour of thread is therefore *anyathāsiddha* with reference to cloth and is typical of the *second class* of dispensable antecedents. The *third class* of dispensable antecedents is represented by ether (*ākāśa*) in relation to a cloth; in this case, ether being eternal, it may be

easily shown to precede every effect; but it has to be conceived of as cause through the delimiting adjunct etherness (*ākāśatva*), which involves causal relation with sound; a thing which cannot be specifically thought of except as the cause of a certain effect may well be imagined to be a thing whose causal efficacy is completely pre-occupied in the direction of that effect and is no longer available in any other direction; and the feeling, therefore, in the case of *ākāśa*, is that it may may be dispensed with in producing a cloth. The *fourth* variety of *anyathāsiddha* is represented by instances like the weaver's father with reference to a cloth woven by his son; only as the weaver's father, he is made out to be the invariable antecedent of the cloth, and not in his own right; and the feeling in that case is that one can do without the weaver's father in accounting for the production of a cloth. The *fifth* variety is represented by instances like an ass; it may so happen that in the case of an individual cloth, a certain ass precedes it; the particular ass necessarily turns out to be the invariable antecedent of the particular cloth; but it is felt that certain antecedents, other than the ass, which are known to be quite adequate to account for the production of similar cloths, must be adequate in the case also of the particular cloth under reference; and so, the ass, in that case, is *anyathāsiddha*. Annambhaṭṭa, following Gaṅgeśopādhyāya, would combine the first two varieties into one, and likewise the third and fourth varieties, and would thus recognise only *three* classes of dispensable antecedents. In fact, later Naiyāyikas show that all these five varieties may

be brought under the fifth variety; the principle underlying the fifth variety may be stated thus; while other invariable antecedents are made out to be quite necessary and adequate for producing similar effect belonging to the same class, or to be more accurate, while invariable antecedents of a relatively simpler type are made out to be quite necessary and adequate for producing such effects, in the case also of the effect in question, an invariable antecedent, which is not one of such antecedents felt to be necessary in the case of similar effects belonging to the same class, and which is less simple than such antecedents in respect of form (*śarīra*) or thought (*upasthiti*) or relation (*sambandha*) as the case may be, should be eliminated as a dispensable antecedent (*anyathāsiddha*); this principle holds good in all the five varieties of *anyathāsiddha*. Thus all the five varieties may be brought under the comprehensive formula that invariable antecedents of a simpler type being quite adequate to account for the effect under reference, another antecedent, though invariable, has to be discarded as a dispensable antecedent (*anyathāsiddha*). This formula is expressed in this way in Nyāya literature—"*laghuniyatapūrvavartinaiva kāryasambhave tadbhinnam anyathāsiddham.*" The adjunct *ananyathāsiddha* in the definition of a cause is intended to eliminate all such antecedents as one can reasonably feel one may well do without. After introducing the qualification 'not made out to be otherwise than indispensable' (*ananyathāsiddha*), it has to be considered whether the adjunct 'invariable' (*niyata*) is necessary. It would appear that most of

the antecedents which are not invariably concomitant with the consequents in question can easily be eliminated as dispensable antecedents; for instance, an ass is neither an invariable nor an indispensable antecedent of a certain cloth. However, when the whole species of effects represented by cloth is sought to be connected as effect with some species as cause, the general formula of *anyathāsiddha* does not hold good; for, one can never say that the antecedents recognized as causing another species of effects, like a jar, would be adequate to produce the species under reference, *viz.*, cloth; and in such cases, the only way in which accidental antecedents like an ass can be eliminated would be through the adjunct 'invariable' (*niyata*).

The conception of a *kārya* or an effect involves, according to the Nyāya theory of causation, the idea that the effect is invariably preceded by its antecedent non-existence. To say that a jar is produced means, in the Nyāya theory, that it is created for the first time and that it never existed before. Consistently with the creationistic view of causation (*ārambhavāda*), Annambhaṭṭa defines an effect as the counter-correlative of antecedent non-existence. In this connection students are advised to consider again the remarks about *prāgabhāva* in pages 37 to 40, part III, *supra*. Positive product (*bhāvakārya*) has three kinds of causes; the first being of the nature of component parts or of the nature of the substratum in which the effectuated quality or activity inheres and called 'inherent cause' (*samavāyikāraṇa*); the second being of the nature of the conjunction of parts producing the whole or of the nature of the

quality or activity inhering in the component parts or a substratum and producing a corresponding quality in the whole or disjunction in the same substratum, and called non-inherent cause (*asamavāyikāraṇa*); and the third being of the nature of agent and such other causes, not falling under either of the first two heads, and being called occasioning cause (*nimittakāraṇa*). It would be a mistake to suppose that all the *nimittas* are less important than the other two varieties. For, *kartā* or the intelligent agent, in whose absence the other causes become ineffectual, is technically a *nimitta*, but is, in a sense, the most important of all the varieties of causes.

That is a *samavāyikāraṇa* in which the effect *inheres* as it comes into being. The component parts (*avayavāḥ*), like threads, thus form the inherent cause of a composite substance (*avayavin*), like a cloth; and likewise a substance, of the quality or activity which is produced in it. To secure precision and avoid confusion, the delimiting adjuncts of *effectness* (*kāryatā*) and *causeness* (*kāraṇatā*)—*kāryatāvacchedakadharma* and *kāraṇatāvacchedakadharma*—should be specified in defining the relation of cause and effect in every case, as also the relations which determine the co-existence of the antecedent and the consequent in question—*kāryatāvacchedakasambandha* and *kāraṇatāvacchedaka-sambandha*. Causality involves invariable co-existence between an antecedent and a consequent; their co-existence (*sāmānādhikaraṇya*) is their presence in the same place; when they are present in the same place they should each be connected with the common sub-

stratum through a relation; the relation which connects the antecedent with the common substratum (*samānādhikaraṇa*) is known as the determinating relation of *causeness* (*kāraṇatāvacchedakasambandha*); and the relation which connects the consequent with the same substratum is called the determining relation of *effectness* (*kāryatāvacchedakasambandha*). The exponents of the Nyāya-Vaiśeṣika doctrine of causation contend that, by a careful observation of the invariable concomitance between an antecedent and a consequent, as determined by particular delimiting adjuncts and relations, as also of the invariable concomitance between the negations of such antecedent and consequent—of *anvayasahacāra* and *vyatirekasahacāra*—the causal relation in every case can be accurately defined so as to obviate every conceivable hitch. In the case of a *samavāyikāraṇa*, like threads in relation to a cloth (*tantavaḥ paṭasya*), the simplest and the most accurate way in which the causal relation may be defined is this: 'the *causeness* delimited by *threadness* and by the relation of identity (*tantutvāvacchinnā tādātmyasambandhāvacchinnā ca kāraṇatā*) is correlated to the *effectness* delimited by *clothness* and by the relation of inherence (*paṭatvāvacchinnasamavāyasambandhāvacchinnakāryatānirūpitā*). It will be seen here that, in every case of *samavāyikāraṇa*, the simplest way of defining the causal relation (*kāryakāraṇabhāva*) would be by referring to the cause itself as the common substratum (*samānādhikaraṇa*) in which the antecedent and the consequent under reference co-exist. In Nyāya definitions of causality, the common substratum kept

in view is generally suppressed; and the student of Nyāya has to find it out first before trying to interpret such definitions. It should be noted here that the Nyāya conception of *samavāyikāraṇa,* while it includes what the Vedāntins call the *upādānakāraṇa* (material cause), is not exactly parallel to it; because, *upādāna* (material cause) is the substance which enters into the make-up of its product and this is true, in the Nyāya theory, only in the case of the component parts and their composite product, and not in the case of a substance and the quality or activity arising in it, the cause and effect in the latter case representing fundamentally different categories. It should also be observed here that the phrase *inherent cause, samavāyikāraṇa,* is somewhat misleading, in that it may lead one to suppose wrongly that it is the cause that inheres in the effect but the fact is that the phrase here means 'a cause which is capable of producing an effect that inheres in it'. It may appear at first view that the phrase 'intimate cause' is a better equivalent; but it turns out to be more misleading when the corresponding phrase non-intimate cause comes to be used as the equivalent of *asamavāyikāraṇa,* as may be seen presently from the next para.

The phrase *asamavāyikāraṇa* means a cause which, under no circumstance whatever, could be treated as a *samavāyikāraṇa* (inherent cause). Substances only can be treated as *samavāyikāraṇa* and they can never be treated as *asamavāyikāraṇa.* Qualities and activities only can be treated as *asamavāyikāraṇa.*

While the two kinds of causes—inherent cause (*samavāyi*) and non-inherent cause (*asamavāyi*)—are absolutely exclusive of each other, the third kind—*viz.*, occasioning cause (*nimittakāraṇa*) includes causal factors which, while being the *nimitta* of certain effects may well be the inherent or non-inherent causes of certain other effects, as the case may be. The phrase *non-inherent* cause used as the equivalent of *asamavāyikāraṇa* should not be taken to mean that the cause referred to does not inhere in any substratum, since every non-inherent cause, on the contrary, inheres somewhere; but this phrase should be understood to stand for, like its Sanskrit equivalent, a cause which, under no circumstance whatever, could be treated as *inherent* cause. In defining the causality of a non-inherent cause, the inherent cause of the effect in question should be kept in view as the common substratum (*samānādhikaraṇa*), inherence (*samavāya*) should be referred to as the relation determining the presence of the effect in question in the common substratum (*kāryatāvacchedakasambandha*), and either inherence or co-inherence (*samavāya* or *ekārtha-samavāya*) should be referred to as the relation determining the presence of the cause in question in the common substratum (*kāraṇatāvacchedakasambandha*). The conjunction of threads (*tantusaṁyoga*) is the non-inherent cause of cloth; and in that case, the common substratum is thread; the relation connecting cloth with such substratum is inherence; and likewise, the relation connecting the conjunction of threads with such substratum is inherence; this is one type of non-in-

herent cause. Another type of non-inherent cause is to be found in the colour of the threads forming the component parts of a cloth; in this case, the colour of the threads is the non-inherent cause of the colour of the cloth; the common substratum is the cloth; the relation connecting the effect with such substratum is inherence and the relation connecting the cause with it is *co-inherence.* It should be remembered here that, according to the Nyāya-Vaiśeṣika system, the special qualities (*viśeṣaguṇāḥ*) of soul (*ātman*) should not be treated as non-inherent cause in the case of any effect, though the general definition of such cause holds good in the case of knowledge in relation to desire, of desire in relation to voluntary decision or effort (*yatna*) and in such other cases. The chief reason why the special qualities of soul should not be treated as non-inherent cause in the case of any effect is that, in all such cases, it would be simpler to treat the contact between the soul and the mind (*ātmamanassaṁyoga*) as non-inherent cause and in the case of any effect, more than one non-inherent cause need not be recognized. In view of this, in the general definition of non-inherent cause given in the text, it is necessary to introduce the qualification that such cause is different from the special qualities of soul (*ātmaviśeṣaguṇabhinnam*).

The atomic hypothesis of the Nyāya-Vaiśeṣika system and the creationistic view of causation maintained in that system are closely bound up with each other. The Nyāya-Vaiśeṣika theory of causation is known as *ārambhavāda* (creationism) as distinguished from the *pariṇāmavāda* (evolutionistic view of causa-

tion) of the Sāṁkhyas. In the Nyāya-Vaiśeṣika system, 'to come into being' means 'to spring up at a certain point of time and not to have existed before'; for this reason, the Nyāya theory of causation is known as *asatkāryavāda*. The expression *asatkārya-vāda*, according to Naiyāyikas, means 'the view that every effect is invariably preceded by its antecedent non-existence' and it should not be understood to imply that an effect arises out of nothing. On the contrary, according to the Nyāya theory, a positive product (*bhāvakārya*) is invariably preceded by a causal machinery, the full complement of which includes several positive antecedents and two negative antecedents, *viz.*, the antecedent negation of the effect in question (*kāryaprāgabhāva*) and the absence of counteracting causes (*pratibandhakābhāva*). The Naiyāyikas are anxious to repudiate the suggestion that their theory of *asatkāryavāda* implies that an effect may arise out of nothing; and they point out that antecedent negation (*prāgabhāva*) would be inconceivable without thinking of a suitable *anuyogin* (correlated substratum) and *pratiyogin* (counter-correlative), and that in the case of *prāgabhāva*, as in the case of annihilative negation (*dhvaṁsa*), while the effect itself represents the latter, the inherent cause (*samavāyikāraṇa*) represents the former. Invariable concomitance between an antecedent and a consequent (*niyatapūrvavartitva*) and absence of such circumstances as would justify the idea that the antecedent in question is not indispensable (*ananyathāsiddhatva*)—these are the two essential elements in the Nyāya con-

cept of causality. The former, according to the Naiyāyikas, is generally made out through a knowledge of the invariable sequence between two positive factors (*anvayasahacāra*) and of the invariable concomitance between the negations of those two factors (*vyatirekasahacāra*). The formula for *anvayasahacāra* is usually stated thus:—"Whenever C precedes, E follows"; and that for *vyatireksahacāra* thus:—"Whenever C does not precede, E does not follow." The latter formula is intended to serve as a corrective to the former and effectively eliminates the mistake which may arise through an exclusive adoption of the former formula and which consists in mere co-existence or sequence being taken for causality. There are certain cases where it is not possible to make out negative concomitance (*vyatirekasahacāra*); for instance, where a cause, like God, is *ex hypothesi* present everywhere and the invariable antecedent of every conceivable effect, the negative formula of *vyatireka* cannot possibly apply. In such cases, the affirmative formula of *anvaya* alone is available and depended upon. In all other cases, the Naiyāyikas insist that causality should be determined through an application of both the formulas of *anvaya* and *vyatireka*. Where these two formulas are applied to instances falling within the range of direct observation (*pratyakṣa*) and as a result causality is made out, it is said to be made out through *pratyakṣa*. Students of Western logic, who are familiar with the experimental methods formulated by Mill for determining causal relations, may be able to

find in the combination of the Nyāya formulas of *anvaya* and *vyatireka* a parallel to what is known as the *joint method af agreement and difference.* The Naiyāyikas are keenly alive of the difficulties in determining causality, which are brought about by cases of *plurality of causes* and *intermixture of effects.* They contend that, strictly speaking, there can be no plurality of causes or intermixture of effects. If fire appears to be the effect of straw (*tṛṇa*), or tinder-sticks (*araṇi*), or lens (*maṇi*), the fact is that the same effect is not produced from these three causes and the effect in each case has different properties. Such differences in effects may be apparent in certain cases and may be subtle and have to be noted with care in others. In a similar way, the effects of different causes may be mixed up; and in such cases, these effects should be carefully distinguished. The Naiyāyikas are never tired of reminding themselves and others of the need for carefully observing and making out the relation of invariable concomitance between particular classes of antecedents and consequents, as also between their negations. This need is embodied in Udayana's dictum—"Concerning the truth about the affirmative and the negative concomitance, one should be particularly careful" (*tattve yatnavatā bhāvyam anvayavyatirekayoḥ*). It is contended by the Naiyāyikas that our experience of several things as existing only during a particular period of time and never existing before that time—in other words, as being *kādācitka* in their nature—cannot be satisfactorily explained except by assuming causal relation between such things and certain antecedents. The

causal factors also—some of them at least—should themselves be occasional (*kādācitka*) and contingent, for the reason that, otherwise, the prior non-existence of the effects in question cannot be accounted for. This would mean that a beginningless chain of causes and effects should be admitted; and the Naiyāyikas do not hesitate to say that the stream of causes and effects is beginningless (*kāryakāraṇapravāho'nādiḥ*), for the simple reason that the starting point, if any, of the causal stream lies far beyond human ken.

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T—(*a*) Of those *pramāṇas*, perceptive instrument (*pratyakṣa*) is the means of perception.

(*b*) Perception is the cognition which is produced through sense-organ coming into relation with an object. It is of two kinds:—indeterminate and determinate.

(*c*) Indeterminate perception is a cognition which does not involve any attribute or adjunct (*prakāra*).

(*d*) Determinate perception is cognition which involves an attribute or adjunct. It is embodied in propositions like "This is *Ḍittha*", "This is a

Brāhmaṇa", "This is *black*", "This is a *cook*".

The definition of perceptive instrument (*pratyakṣapramāṇa*) is based on Gautama's *sūtra* I. 1. 4, which runs thus:—*indriyārthasannikarṣotpannaṁ jñānam avyapadeśyam avyabhicāri vyavasāyātmakam pratyakṣam*". This *sūtra* may be rendered thus:—"Perception is cognition which arises through sense-organ coming into relation with object, and which is *non-verbal, unerring* and of the nature of *indubious* knowledge". The Sūtrakāra is evidently defining valid perception (*pratyakṣapramā*) in order to definitely indicate the nature of the instrument of valid perception (*pratyakṣapramāṇa*). According to the earlier interpretation of this *sūtra*, as given in Vātsyāyana's *bhāṣya*, the adjunct 'unerring' (*avyabhicāri*) excludes erroneous perception; and the adjunct 'indubious' (*vyavasāyātmaka*) excludes doubt. The adjunct 'non-verbal' (*avyapadeśya*) in the *sūtra* is understood in various ways by different scholiasts. Some of the old scholiasts take this adjunct to mean 'not coming within the scope of expressions referring to objects' (*śabdakarmatām āpannam na bhavati yat*); and in this sense, it differentiates perception as described by the expressions referring to objects from perception as it arises, the former having become objectified as *prameya* and thus ceased to belong to the subjective sphere of *pramāṇa* (valid cognition). Some other Naiyāyikas of an early school would take the adjunct 'non-verbal' (*avyapdeśya*) in the sense of 'not being caused by *word*

in association with sense-organ' (*anubhayaja* or *śabdākṣobhayajabhinna*); and, in this sense, it should be understood as excluding cases where the meaning of a word is made out through the perceptual observation of the way in which an object is referred to by that word, or in other words, cases where a word is first made out to be significative of a certain object that is actually being perceived by a sense-organ. In such cases, they hold that the cognition in question should be brought under verbal cognition (*śābda*) and not under perception. Another set of early Naiyāyikas, (like Jayantabhaṭṭa) would take *avyapadeśya* in the sense of *aśābda* (non-verbal) and would explain its purpose as consisting in saving determinate perception (*savikalpaka*) from being merged in verbal cognition (*śābda*) on the ground that the cognitive process involved in such perception invariably results through the operation of a sense-organ in association with the recollection of a scheme of words with which the knower happens to be familiar. Vācaspatimiśra and several others who follow him would take the word *avyapadeśya* (non-verbal) and *vyavasāyātmaka* (definite and determinate) as referring to the two kinds of perception—*viz.*, indeterminate (*nirvikalpaka*) and determinate (*savikalpaka*). They maintain that the former adjunct (*avyapadeśya*) refutes the view of the grammatical philosophers who refuse to recognize *nirvikalpaka* and hold that knowledge is impossible except though some language and no object is cognized by itself and without being associated with the word signifying it. (*Na so'sti pratyayo loke yatra śabdo na*

bhāsate). The latter adjunct (*vyavasāyātmaka*), they further maintain, refutes the Buddhist doctrine that indeterminate perception (*nirvikalpaka*) is the only genuine type of valid perception and that all determinate cognitions (*savikalpaka*) are illusive. The last explanation given by Vācaspatimiśra and his followers is generally accepted by later Naiyāyikas and Gautama's *sūtra* dealing with perception (I. 1. 4) is believed to presuppose both the types of perception—determinate (*savikalpaka*) and indeterminate (*nirvikalpaka*).

What exactly is the nature of indeterminate peception and how does it differ from determinate peception? The answer suggested by Annambhaṭṭa's definitions of *nirvikalpaka* and *savikalpaka*, which follow Gaṅgeśa's view, may be explained in this way. In the first place, it should be remembered that the Nyāya distinction of erroneous cognition (*bhrama*) and valid cognition (*pramā*), which is intended to apply only to cognitions leading to some activity (*pravartaka*), holds good only in the case of determinate cognitions and cannot have any reference to indeterminate cognitions. The relation of object and subject (*viṣayaviṣayibhāva*) involved in a determinate cognition is a definite complex consisting of three correlated phases—adjunctness (*prakāratā*), substantiveness (*viśeṣyatā*) and relationness (*saṁsargatā*). In an indeterminate cognition, on the other hand, there is the relation of object and subject; and while a thing, its attribute such as a generic feature (*jāti*) and their relation are presented in it, they are not presented in a specific manner in their respective forms as a qualified substantive (*viśeṣya*), as a qualify-

ing attribute (*viśeṣaṇa*) and as a relation of a definite type (*saṁsarga*). Such indeterminate cognitions have only to be inferentially arrived at through determinate cognitions, on the basis of the observed causal relation between a cognition of a certain attribute (*viśeṣaṇa-jñāna*) and a complex cognition of a thing as having that attribute (*viśiṣṭajñāna*). On this ground, the determinate cognition of a jar, for instance, one cannot possibly have without previously having an indeterminate cognition in which the substance in question, its generic attribute and even their relation are presented in a vague and undifferentiated form. Indeterminate cognitions are therefore said to be *atīndriya* (beyond the scope of any sense), while determinate cognitions are generally perceived by mental perception (*mānasa-pratyakṣa*) and presented in *anuvyavasāya*. It may also be noted that a *nirvikalpaka* can never be directly expressed in a proposition and that every proposition, according to Naiyāyikas, embodies and conveys a determinate cognition (*saṁsargāvagāhijñāna* or *savikalpaka*).

The grammatical philosophers (*śābdikas*) as already stated, refuse to recognize *nirvikalpaka*. All the other philosophers recognize the distinction between *nirvikalpaka* and *savikalpaka* in one form or other. In the first place, the Buddhists hold that the *nirvikalpaka* is the only form of valid perception and it cognizes the absolute, unrelated, momentary existence called *svalakṣaṇa* (the mere *thing-in-itself*); while the determinate cognitions (*savikalpaka*) are illusive in that they involve wholly fictitious fabrications (*vikalpa* or

kalpanā), which usually take the forms of a name (*nāma*), a generic attribute, (*jāti*), a quality (*guṇa*), an activity (*kriyā*) and a substance (*dravya*). The Advaitins hold that indeterminate cognition (*nirvikalpaka*) may arise from propositions like 'This is that Devadatta' (*so'yam devadattaḥ*) and 'That thou art' (*tat tvam asi*); and that the absolute existence alone (*sanmātram*), which is identical with *Brahman*, is presented in indeterminate cognitions (*nirvikalpaka*). The Mīmāṁsaka view of *nirvikalpaka* is that it is an indeterminate perception which consists in the direct and simple awareness of an individual object (*vyakti*) and its generic attribute (*jāti*) which arises immediately after the sense-organ comes into relation with them; and that it misses the definite feature of the *jāti* as being common to several individuals belonging to a particular class and the specific character of the *vyakti* as being different from others—*i.e.*, the element of *anuvṛtti* in the former case and of *vyāvṛtti* in the latter case. This is closely similar to the old Vaiśeṣika view of *nirvikalpaka*. Praśastapāda describes indeterminate perception as simple awareness (*ālocanamātra*) and Kumārila, in his description of it, uses the same expression and compares it to the *unverbalised dumb experience* of a child or a dumb person. Indeterminate perception is only to be inferred like any other cognition, in the view of Bhāṭṭas; while it is presented in itself along with the knower and the known object, as in the case of other cognitions, according to the Prābhākaras. The Vedāntins of the Viśiṣṭādvaita school adopt the Prābhākara view of indeterminate perception and main-

tain that every cognition, however simple it may be, involves a substantive, an attribute and their relation; that both *sāmānya* (generic attribute) and *viśeṣa* (the individual *vyakti*) are presented in *nirvikalpaka* along with difference in the form of the individual object (*vyaktisvarūpa*); and that, at the stage of *nirvikalpaka*, the knower does not realize that the generic attribute presented in his knowledge is common to all the individuals belonging to the same class and that these individuals are different from the individuals belonging to a different class, and he is not, therefore, in a position to articulate his indeterminate perception through verbal expression.

The Advaitic view of *nirvikalpaka*—that the absolute existent (*Sattā=Brahman*) is the only thing which is presented in it and that the highest form of truth-realization which leads to final emancipation is a *nirvikalpaka*—is an inevitable development of the doctrine of *nirvikalpaka* as adopted by the exponents of the Nyāya-Vaiśeṣika system. The Nyāya-Vaiśeṣika realists have shown how a permanent reality, and not a momentary isolated 'this' (*svalakṣaṇa* or *thing-in-itself*) as in the case of the Buddhist theory of *nirvikalpaka*, may be presented in indeterminate perception; and it has thus become easy for the Advaitins to push the Nyāya theory of *nirvikalpaka* to its logical conclusion and to maintain that the true *nirvikalpaka* is one in which *Brahman*, the only absolute and permanent reality, is presented. This is, indeed, one of the several instances in which the Advaitic Monist effectively uses a weapon made in

the Nyāya forge against its maker himself to annihilate his pluralistic universe. Jayantabhaṭṭa, an authoritative exponent of Nyāya, observes in a significant manner that the only way in which one may get out of the mess which various Indian theorists have made of the content of *nirvikalpaka* would be by adopting the view that the same reality that is presented in *savikalpaka* is presented in the *nirvikalpaka*, the only difference between them being that the former is invariably bound up with a linguistic scheme or verbal image while the latter is not and cannot be specifically articulated through any verbal expression. The sub-joined extracts from the Nyāyamañjarī (*Viz. S. S.* page 99) deserve a careful consideration in this connection:—

"*Tasmad ya eva vastvātmā savikalpasya gocaraḥ;*
Sa eva nirvikalpasya śabdollekhavivarjitaḥ.
Kimātmako'sāviti ced yad yadā pratibhāsate;
Vastupramitayaścaiva praṣṭavyā na tu vādinaḥ.
Kvacijjātiḥ kvaciddravyam kvacitkarma kvacid guṇaḥ;
Yadeva savikalpena tadevānena gṛhyate.
Iha śabdānusandhānamātramabhyadhikam param."

The Nyāya-Vaiśeṣika definition of *pratyakṣa* (sense-perception) generally insists that sense-data form its essential feature and that it is invariably the result of a special type of relation called *sannikarṣa* between a sense and an object. This definition takes into account only perceptual experiences which are produced from certain causes and does not hold good in the case of the eternal omniscience which is also called

pratyakṣa and which is ascribed to God. Strictly speaking, the etymology of the word *pratyakṣa* would support its application only to perceptual experiences arising from the senses. However, usage has extended the term to all cognitions which are characterised by immediacy. God's omniscience has the highest degree of immediacy conceivable. So, in order to cover *nitya-pratyakṣa*, also, perception is defined as a cognition which does not arise through the *instrumentality* of another cognition; (*jñānākaraṇakam jñānam pratyakṣam*). It should be remembered that, though a determinate perception arises from an indeterminate perception, the latter does not operate as *karaṇa* (efficient instrument).

It would be desirable to consider here whether perception, in the sense in which it is used in the Nyāya-Vaiśeṣika system, may correctly be called *intuition*. Without misapprehension, the term intuition may be used with reference to perception (*pratyakṣa*), only in the sense that it possesses a comparatively greater degree of immediacy, as compared with non-perceptual cognitions. If *intuition* should be taken to exclude absolutely mediacy of any kind whatever, the *pratyakṣa* of the Nyāya system, which arises through a special kind of relation between an object and a sense-organ, cannot be called intuition. In the strict sense of the term *intuition*, it may be proper to use it only with reference to what is sometimes called *pratibhā* or the innate capacity of the mind to immediately perceive certain things; and it may also be appropriate to describe the Advaitic realisation of the one absolute

reality as *intuition,* in view of the fact that it results from the intuitive faculty of mind to perceive reality coming to have a full, free and efficient play after the required preliminary discipline of studying and understanding (*śravaṇa*), reflective thinking (*manana*) and constant meditation (*nididhyāsana*). In fact, in the Nyāya system, all knowledge is mediate in a sense, except the eternal knowledge ascribed to God, even indeterminate perception depending upon the mediation of a special kind of relation between sense-organ and object (*indriyārthasannikarṣa*).

The Bhāṭṭa Mīmāṁsakas adopt, for all practical purposes, the Nyāya definition of perception and would, like Naiyāyikas, lay special stress on *indriyārthasannikarṣa.* The Prābhākaras, on the other hand, define perception as 'direct awareness' (*sākṣāt pratītiḥ*); and according to them, even recollection, inference and such other cognitions, usually considered non-perceptual in their character, are really perceptual on the subjective side, in so far as they themselves and the knower are concerned (*svāṁśe jñātraṁśe ca*), though they are non-perceptual on the objective side, in so far as their objects are concerned (*viṣayāṁśe*). The Advaitic theory of perception rightly points out that the Nyāya view gives undue prominence to *indriyārthasannikarṣa* and belittles the importance of the element of immediacy which ought to be treated as the essential element in *pratyakṣa.* The Advaitins seek to remedy this defect by treating sense-relation as an antecedent necessary only for certain kinds of percep-

tion and by insisting that immediacy consisting in *subject-object-unity* is the essential feature of all perceptual forms of experience, and not sense-relation. Consistently with usage in language, the Advaitins distinguish the *pratyakṣatva* (perceptuality) of a cognition from the *pratyakṣatva* (perceivedness) of an object. They describe cognition (*jñāna*) as *pratyakṣa* (perceptual experience), when it comes to be *unified* for the time being with its object, in the sense that consciousness as conditioned by cognition (*pramāṇa-caitanya* or *vṛttyavacchinnacaitanya*) becomes equated with consciousness as conditioned by object (*viṣaya-caitanya*). In a similar way, they describe an object (*viṣaya*) as *pratyakṣa* (perceived), when the knower (*pramātṛcaitanya*) becomes equated with object or consciousness as conditioned by object (*viṣayacaitanya*). It may be noticed here that the idea that immediacy in the sense of *subject-object-unity* forms the essential element in *pratyakṣa* has turned out to be wholly foreign to Nyāya realism, mainly because the relational scheme on which the realistic edifice of Nyāya is erected consists entirely of external relations, and because the *object-subject-relation* (*viṣayaviṣayibhāva*), in particular, is conceived of as being entirely external in its character, chiefly with a view to keeping the dangerous idealist always at a safe distance.

30 (*e*).

T—The sense-relation (*sannikarṣa*) which causes a perceptual cognition is of six kinds—*viz.*, contact, inherence in what

has come into contact, inherence in what is inherent in a thing which has come in to contact, inherence, inherence in an inherent thing and adjunct-substantive relation.

When a jar is perceived by the sense of sight, the sense-relation is 'contact'. When the colour of a jar is seen, the sense-relation is 'inherence in a thing which has come into contact', the jar, in that case, having come into contact with the visual sense and colour being connected with the jar through the relation of inherence. When colourness (*rūpatva*) in the colour of a jar is seen, the sense-relation is 'inherence in what is inherent in a thing which has come into contact'; for, in that case, the jar has come into contact with the visual sense, the colour of the jar inheres in it and *colourness* inheres in colour.

When sound is perceived by the sense of hearing, 'inherence' is the sense-relation; for, the ether bound within the auricular orifice is the auditory sense,

sound is a quality of ether, and the relation between a quality and its substratum is inherence. When soundness (*śabdatva*) is perceived by the auditory sense, the sense-relation is 'inherence in a thing which inheres'; for, *soundness* inheres in sound which inheres in the auditory sense.

In the perception of non-existence, the *adjunct-substantive-relation* is the sense-relation; for in the case of the visual perception which takes the form—"The seat of the non-existence of jar is floor", the 'non-existence of jar' is an adjunct to the floor with which the visual sense has come into contact.

Thus the cognition which arises from one or the other of these six sense-relations is perception; and sense-organ is its efficient instrument (*karaṇa*). Therefore, the senses constitute the efficient instrument of perceptual experience (*pratyakṣa-pramāṇa*).

[Thus ends the chapter on perception]

In the foregoing portion of the text, the scheme of *sannikarṣa* adopted by the Naiyāyikas is set forth. The term *sannikarṣa* is used in a technical sense; it is not a mere relation, nor is it exactly contact, for the word 'contact' is generally taken to be equivalent to *saṁyoga*. It would be correct to describe *sannikarṣa* as a special type sense-relation which determines and constitutes the extent of the *perceptive reach* or *range* of the sense-organs. In Nyāya literature, the term *sannikarṣa* is generally used in this technical sense. The scheme of *sannikarṣa* set forth above relates to normal perception (*laukikapratyakṣa*) and comprises normal sense-relations (*laukikasannikarṣa*). The Nyāya-Vaiśeṣika theory regarding the nature and constitution of the sense-organs (*indriya*) is already set forth on pages 65, 66 and 68 *supra*. According to the Naiyāyikas, the visual sense (*cakṣuḥ*), constituted as it is by light, travels to the spot where the visible objects happen to be and visualize them and it is therefore said to be *prāpyakārin*; the remaining senses are said be *aprāpyakārin*, in the sense that they do not leave their place but, remaining where they are, they perceive the objects which come within their reach. Some early exponents of the Nyāya-Vaiśeṣika system, like Jayantabhaṭṭa and Śrīdhara, hold that all the senses are *prāpyakārins*, in the sense that they function with reference to objects within their reach, it being immaterial whether a sense reaches an object or an object reaches a sense. *Samavāya* (inherence) is

recognized as a distinct type of *sannikarṣa* in order to account for the auditory perception of sound. The Nyāya theory of the perception of sound (*śabdapratyakṣa*) is already set forth and explained on pages 101 to 104 *supra*. The Nyāya view regarding the perception of non-existence is that, through the help of effectual non-cognition (*yogyānupalabdhi*), a sense-organ perceives the non-existence of an object which is perceptible to it. As a rule, a sense-organ which perceives an object can also perceive its *jāti* (generic attribute) and its *abhāva* (non-existence). The Nyāya view regarding this matter is usually expressed in this Sanskrit dictum—"*Yenendriyeṇa yā vyaktiḥ gṛhyate, tanniṣṭhā jātiḥ tadabhāvaśca tenendriyeṇaiva gṛhyate*". It is necessary, in this connection again, to refer to pages 45 and 46 *supra*. The relation of *viśeṣaṇa-viśeṣyabhāva*, which is recognized as the *sannikarṣa* connecting non-existence with a sense-organ, is, in fact, an indirect relation involving one or the other of the other *sannikarṣas*. For instance, in the visual perception of the non-existence of jar (*ghaṭābhāva*) as adjunct of the empty floor (*bhūtala*), the visual sense comes into contact (*saṁyoga*) with the empty floor with which the non-existence of jar is connected as adjunct; so, the complete chain of *sannikarṣa*, in this case, is not mere *viśeṣaṇatā*, but *cakṣussaṁyuktaviśeṣaṇatā* (being adjunct to a thing with which the visual sense has come into contact).

In the case of inner perception through the inner sense (*antarindriya*) called *manas*, it is necessary to

recognize three distinct sense-relations;—*viz.*, *saṁyoga*, *saṁyuktasamavāya* and *saṁyuktasamavetasamavāya*, in order to account respectively for the mental perception (*mānasapratyakṣa*) of the soul (*ātman*), of the cognition in it and of cognitionness (*jñānatva*). In connection with the auditory perception of sound (*śabda*) and *soundness* (*śabdatva*), it is necessary to recognize two distinct sense-relations:—*viz.*, *samavāya* and *samavetasamavāya*. The sense relation of *viśeṣaṇaviśeṣyabhāva* is necessary to account for the perception of non-existence. Would it be necessary to use the first three sense-relations (*saṁyoga* etc.) in accounting for external perception through the external senses other than the auditory sense? No substance which does not possess at least the minimum degree of *mahattva* (largeness) can be perceived by an external sense; and in the case of every external perception of substance or quality other than sound, association with *mahattva* is a necessary condition. So, in all cases of external perception, except auditory perception, one has to take into account only composite substances (*avayavin*), from a triad (*tryaṇuka*) upward. It would appear that, in such cases, the first two sense-relations may be dispensed with, and the third—*saṁyuktasamavetasamavāya*—would be quite adequate to account for any perception. For instance, the visual perception of a triad of earth (*pṛthivītryaṇuka*) or its colour (*rūpa*) or its colourness (*rūpatva*) can easily the accounted for by taking *saṁyuktasamavetasamavāya* as the sense-relation; this chain should be understood in the first case (*tryaṇuka*) as consisting of contact between the visual

sense and the atoms, the inherence of dyads in those atoms and the inherence of the triad in those dyads; the first link in this chain in the second case (*rūpa*) is contact between dyads and the visual sense; and in the third case (*rūpatva*), the first link in this chain is contact between the triad and the visual sense. To the above question, the Nyāya theorists reply that the first three sense-relations are indispensable and explain their necessity in this way. Take, for instance, visual perception; the conditions of visual perception such as *udbhūtarūpa* (perceptible colour) and *mahattva* (largeness) should be regarded as the co-existing determinants (*avacchedaka*) of contact with the visual sense (*indriya-saṁyoga*); it would not do if they are associated in some manner with the object visualized; otherwise, the earthness (*pṛthivītva*) in the atoms of earth and the blueness (*nīlatva*) in the blue colour belonging to an atom of earth should be visualized, the former (*pṛthivītva*) being associated with largeness (*mahattva*) in a jar and the latter (*nīlatva*) being associated in some manner with largeness through the blue colour of a jar; or otherwise, as a result of indirect association with *mahattva* and *udbhūtarūpa* in a jar, the *jāti* called *sattā* should be visualized in air (*vāyu*) as well as its touch (*sparśa*); in order to avoid these absurdities, *mahattva* and such other conditions in the case of visual perception should be referred to as *avacchedaka* (co-existing determinant) of contact with the visual sense (*cakṣussaṁyoga*), in all cases of visual perception; In these circumstances, it becomes necessary to leave entirely out of account contact between the visual sense and atoms or dyads;

thus, *saṁyoga*, *saṁyuktasamavāya* and *saṁyuktasamavetasamavāya* are shown to be indispensable in accounting for external perception of a substance (*dravya*), its quality (*guṇa*) and the generic attribute (*jāti*) in the quality.

The scheme of six sense-relations explained above relates only to cases of normal perception (*laukikapratyakṣa*) and these sense-relations are called *laukikasannikarṣāḥ* (normal sense-relations). In the case of perception through the external senses, the complete scheme of relation necessary to bring about perceptual experience consists of contact between soul and mind, mind and sense-organ and sense-organ and object (*ātmā manasā saṁyujyate, mana indriyeṇa, indriyam arthena*). The first of these three factors—*viz.*, contact between mind and soul (*ātmamanassaṁyoga*)—is a general condition of knowledge (*jñānasāmānya*). In cases of *mānasapratyakṣa* (inner perception through the internal sense-organ *manas*), this general condition itself (*ātmamanassaṁyoga*) assumes the specific form of sense-relation (*indriyārthasannikarṣa*).

The Naiyāyikas also recognize three types of super-normal perception (*alaukikapratyakṣa*), as arising from three kinds of super-normal sense relations (*alaukikasannikarṣa*), *viz.*,—the relation of sense-bound generality (*sāmānyalakṣaṇasannikarṣa*), the relation of sense-bound cognition (*jñānalakṣaṇasannikarṣa*) and the relation of *yogic* power (*yogajasannikarṣa*). In Nyāya literature, the word *pratyāsatti* is also used in this context, as the equivalent of *sanni-*

karṣa. The co-existence of smoke and fire is seen in a hearth; this visual perception relates only to the particular smoke and particular fire; a doubt arises as to whether the co-existence between smoke and fire is invariable or not, and takes the form "Is smoke coexistent with the non-existence of fire anywhere or not?" (*dhūmo vahnivyabhicārī na vā*); such a doubt relates to all smokes and all fires; only a particular smoke and a particular fire happen to be seen in the hearth; the perceptual doubt referred to arises through the visual sense and presupposes the visual perception of all smokes—past, present and future, in the hearth and elsewhere (*dhūmasāmānyacākṣuṣam*); the normal sense-relations of contact (*saṁyoga*) and inherence in the thing in contact (*saṁyuktasamavāya*) are established between the visual sense on the one side, and on the other side, the particular smoke and smokeness (*dhūmatva*) in it; no normal sense-relation can be shown to connect the visual sense with all the smokes; in this situation what happens is that the visual perception of the generic feature, smokeness (*dhūmatva*). which is present in the particular smoke normally connected with the visual sense and which is common to all smokes, serves as the super-normal link (*alaukikasannikarṣa*) through which all the unobserved smokes are, in the first instance, connected with the particular smoke actually observed, and through the latter with the visual sense which has already come into relation with it in a normal way. Thus *sāmānyalakṣaṇasannikarṣa* is a super-normal sense-relation which immensely extends the perceptive reach of sense-organ and brings whole

classes of perceptible objects within its scope when only particular individuals of a class have actually come within its reach. The word *sāmānya* in this context means any common attribute (*samānadharma*) and not necessarily a *jāti*; even a jar, for instance, may be treated as the *sāmānya* of all the places having a jar. The earlier view is that the phrase *sāmānyalakṣaṇa* should be understood in the sense 'consisting in *sāmānya*' (*sāmānyasvarūpa*) and that this variety of super-normal sense-relation consists in the common attribute presented as adjunct (*prakāra*) in the cognition of a substantive (*viśeṣya*) which has come into normal relation with the sense-organ. (*Indriyasambaddhaviśeṣyakajñānaprakārībhūtam sāmānyam sannikarṣaḥ*). This view is defective; for, it does not cover, for instance, the super-normal perception of all the places having a particular jar which has ceased to exist and which is remembered as the common attribute (*samānadharma*) of all such places. In that case, one visualizes through the super-normal (*sāmānyalakṣaṇa*) sense-relation all the places having the particular jar which no longer exists (*tadghaṭavataḥ sarvān pradeśān*), while seeing in the normal way only one of such places without the jar and while recollecting the particular jar previously seen in that place in the normal way. *Tadghaṭa* (the particular jar) is the common feature in that instance; if *sāmānya* itself were to be understood as constituting the needed sense-relation, *sāmānyalakṣaṇasannikarṣa* would not be available there, for the reason that the particular jar representing the *sāmānya* no longer exists; but if

cognition of *sāmānya* (*sāmānyajñāna*) should be treated as *sannikarṣa*, the required sense relation in the form of recollection (*sāmānyasmaraṇa*) would be available. For these reasons, Naiyāyikas of the later school take the phrase *sāmānyalakṣaṇa* to mean 'having *sāmānya* as object', the word *lakṣaṇa* being taken in the sense of object (*viṣaya*); and they hold that it is cognition of *sāmānya* (*sāmānyajñāna*) that constitutes the super-normal relation in question. It should be remembered in this connection that while (*sāmānya-jñāna*) avails as super-normal sense-relation in internal perception (*mānasapratyakṣa*) under all circumstances, it avails as such in external perception (*bāhyapratyakṣa*) only when the conditions necessary for bringing about the normal perception of the *sāmānya* in question are present. (*Tadindriyajataddharmabodhasāmagryapekṣitā.*) For instance, one can have a super-normal inner perception (*alaukikamānasapratyakṣa*) of all smokes through the recollection of smokeness (*dhūmatva*), even in darkness; but, in darkness, one can never have a super-normal visual perception (*alaukikacākṣuṣa*) of all smokes through the *sāmānyajñāna* consisting in the recollection of smokeness (*dhūmatva-smaraṇa*). It may also be stated here that one could not become omniscient (*sarvajña*) for the mere reason that one could have super-normal perception of all knowable things (*prameya*) through the cognition of their common feature knowableness (*prameyatva*), since omniscience (*sārvajñya*) consists in a detailed and full knowledge of all things and not in a general knowledge of them.

A person *sees* sandal; his sense of smell does not function for the moment and his sense of sight alone functions; he *sees* not only sandal but also its fragrance; his visual perception assumes the form "the sandal is fragrant" (*surabhi candanam*), and he is conscious of the fact that he is seeing the fragrant sandal. In cases like this, no normal sense-relation (*laukikasannikarṣa*) between the visual sense and fragrance can be recognized and the presentation of fragrance (*saurabha*) in visual perception as an adjunct of sandal has to be accounted for by means of the super-normal sense-relation (*alaukikasannikarṣa*), which consists in the recollection of fragrance smelt in the sandal on a previous occasion. This variety of super-normal sense-relation is called *jñānalakṣaṇasannikarṣa*. By means of *sāmānyajñāna* (cognition of a common attribute) representing *sāmānyalakṣaṇasannikarṣa*, it would be possible to account for fragrance being brought within the scope of the visual perception of sandal, the required sense-relation being found in the cognition of fragranceness (*saurabhatva*)—the generic feature of fragrance. But the presentation of *saurabhatva* in the visual perception of sandal cannot be accounted for by means of *sāmānyalakṣaṇasannikarṣa*, since *saurabhatva* is a *jāti* and is therefore presented in cognition as adjunct by itself (*svarūpataḥ*) and not as delimited by any attribute. In this case, it becomes unavoidably necessary to recognize *jñānalakṣaṇasannikarṣa* as distinct from *sāmānyalakṣaṇa*. Further, where a person mistakes nacre for silver in visual perception and has the *anuvyavasāya*—'I see silver', silverness

(*rajatatva*) is presented in the inner consciousness of visual perception through *jñānalakṣaṇa*, and not through *sāmānyalakṣaṇa*; for, in the latter case, the generic attribute, whose cognition is proposed to be treated as *sannikarṣa*, should be present in the substantive (*viśeṣya*) actually perceived, and in the present instance, silverness is not present in the nacre which is seen. On these grounds, the Naiyāyikas maintain that *jñānalakṣaṇa* should be taken to form a distinct type of super-normal *sannikarṣa*. They also hold, on the strength of the evidence furnished by the *Yogaśāstra*, that the super-normal capacity, which the mind (*manas*) acquires through the yogic practice, constitutes the third variety of *alaukikasannikarṣa* described as *yogajadharmalakṣaṇa*. This variety of super-normal sense-relation enables any sense to reach any object.

The Nyāya theory of *alaukikasannikarṣa* seeks to account for certain cognitions which really stand on the border line between ordinary perceptual cognitions and non-perceptual cognitions and would appear to be more akin to the former than to the latter. The Mīmāṁsakas and the Advaitins are not in favour of this theory and refuse to recognize any special type of *pratyakṣa* known as *alaukikapratyakṣa*. These opponents of the Nyāya theory argue thus. Universal judgments relating to smokes and fires in general terms are the result of the synthesis which a thinker's mind is capable of making; this synthesis is sometimes effected through a negative process and sometimes through a positive process; in the case of a negative synthesis, particular individuals only are observed and brought

into relation with each other as determined by certain generic features, the individualities of the individuals being entirely ignored for the moment; such a negative synthesis may well be brought under normal perceptual process (*laukikaprataykṣa*). In positive synthesis, a generalisation of all the conceivable individuals, without ignoring their individualities, is definitely contemplated and is effectuated by the thinker's mind passing from particulars to universals; the mental process involved in such a positive synthesis is essentially one of inference. In cases like the visual perception of sandal as fragrant (*surabhi candanam*), one may see easily a jumble of visual perception of sandal and recollection of fragrance through association of ideas. Even in the case of yogic perception, what happens, in fact, is that the normal reach of the mind comes to be immensely extended by yogic powers through the great potentialities of the mind becoming actualised in experience; and all instances of yogic perception may be accounted for, without the help of the theory of super-normal sense-relation, either as *mānasapratyakṣa* (inner perception) or as vivid recollection of the past, or as vivid imagination of future possibilities. Mīmāṁsā theorists discard the doctrine of yogic perception altogether.

However, it should be observed here that the Nyāya theory of *alaukikapratyakṣa* (super-normal perception) rests on reasons which should not be lightly brushed aside and which are worthy of very careful consideration. In the first place, it may be noted that, in every case which a Naiyāyika would bring under the

super-normal variety of perception, the mediacy which is characteristic of non-perceptual cognitions is entirely missing and the immediacy which is characteristic of perceptual cognitions is invariably felt to be present. In cases of external perception, where cognition of a *sāmānya* or cognition of some other kind is treated as *sannikarṣa*, the mind is entirely subordinated to a sense and if certain impressions derived from previous experience get mixed up with perceptual elements, such impressions come to be divested, for the time being, of their non-perceptual character and invested with a sense-bound, perceptual garb. The inner consciousness (*anuvyavasāya*) of disciplined minds, which takes a form like this "I *see* a *fragrant* sandal" (*surabhi candanam paśyāmi*), is certainly an evidence which the Naiyāyikas feel bound to respect and rely upon, in this connection.

CHAPTER II

INFERENCE

31

(*a*) *Anumāna* (Inference) is the efficient instrument (*karaṇa*) of inferential cognition.

(*b*) Inferential cognition is a cognition which arises from subsumptive reflection (*parāmarśa*).

(*c*) *Parāmarśa* (subsumptive reflection) is a cognition which cognizes the presence of the invariably concomitant factor denoted by the middle term (*probans*) in the thing denoted by the minor term. For instance, the cognition, "This mountain has smoke which is invariably concomitant with fire" is a subsumptive reflection; and the cognition resulting from it and taking the form "mountain has fire" is inferential cognition.

(*d*) "Wherever there is smoke there is fire"—This type of invariable concomitance is *vyāpti* (co-extension).

(*e*) Subject - adjunctness (*pakṣadharmatā*) consists in the invariable concomitant (*vyāpya*) being present in things like a mountain (denoted by *pakṣa* or the minor term).

Anumāna, as its etymological sense indicates is *after-proof*. It is after-proof in the sense that it uses the knowledge derived from perception (*pratyakṣa*) or verbal testimony (*āgama*) and helps the mind to march on further and add to its knowledge. As Vātsyāyana puts it, it is equivalent to *anvīkṣā*; and the Nyāya system is called *ānvīkṣikī*, for the reason that its immediate and chief aim is to elucidate the nature of *anumāna* or *anvīkṣā* as a *pramāṇa*. (*Pratyakṣāga-māśritam anumānam; sā anvīkṣā; tayā pravartata ityānvīkṣikī nyāyavidyā nyāyaśāstram.*) Seeing that verbal testimony is not recognized as a distinct *pramāṇa* by the Bauddhas and the Vaiśeṣikas, the Nyāya writers prefer to consider *śabda* at the end and rightly proceed to consider *anumāna* immediately after *pratyakṣa*.

It would be interesting to note here how the Nyāya realist deals with the criticism that all knowledge may, in a sense, be brought under inference and that even perceptual experience may be brought under inference. It may well be contended that, in the visual experience

of a composite structure like a horse, only certain parts of the animal come into relation with the sense of sight and several parts do not, in fact, come into relation with the sense; and that in such cases, the experience of the whole, of which we become conscious, must be taken as inference. Gautama himself refers to this contention in II—1—31 and indicates how this difficulty may be met by using the Nyāya theory that the composite whole (*avayavin*) is entirely different from its parts (*avayavāḥ*). The Nyāya theorists claim that their conception of parts and whole as entirely different entities has as its chief advantage the preservation of the province of *pratyakṣa* from being wholly swallowed up in the province of *anumāna*.

In the case of every *pramāṇa*, the *karaṇa* (special or efficient instrument), the *vyāpāra* (intermediate cause) and the *phala* (final result) should be carefully distinguished. In the case of *anumāna* (instrument of inferential experience) the knowledge of co-extension (*vyāptijñāna*) is *karaṇa*; subsumptive reflection (*parāmarśa*) is *vyāpāra*; and inferential experience (*anumiti*) is *phala*.

Students of Nyāya, before they proceed to study the Chapter on *anumāna*, should start with a clear conception of the meanings of the technical terms *pakṣa*, *sādhya* and *hetu* or *sādhana*. They are usually rendered respectively by the English equivalents— *minor* term, *major* term and *middle* term. But it should be remembered here that these English terms have primary reference to certain terms constituting syllogistic

expression; whereas, in Sanskrit Nyāya, the term denoting *pakṣa* corresponds to the *minor* term, the term *pakṣa* itself standing for the substantive with reference to which something has to be inferred or inferentially predicated; the term denoting *sādhya* corresponds to the *major* term, the term *sādhya* itself standing for the thing that is sought to be inferred or inferentially predicated with reference to *pakṣa*; and the term denoting *hetu* or *sādhana* corresponds to the *middle* term, the term *hetu* or *sādhana* itself standing for the reason or ground which is invariably concomitant with what is sought to be inferred and whose knowledge leads to inference. Thus, one may see in the Indian terminology itself evidence of a fundamental difference in the way in which the topic of inference is treated in Indian logic as compared with the way in which European tradition deals with that topic—such difference consisting in greater stress being laid on the material aspects of inference by the exponents of the Nyāya-Vaiśeṣika system and undue stress being laid by European tradition on the formal side of syllogistic expression.

Annambhaṭṭa defines *anumiti* as a cognition produced by subsumptive reflection (*parāmarśa*). This definition, as it is, may be applied even to a perceptual experience following a doubt and arising from a subsumptive reflection. With reference to a man standing at a distance, a doubt may arise in twilight, as to whether he is a man or a post. As one approaches the object, the cognition "This object has hands and such other features as are found invariably associated with

humanity" (*puruṣatvavyāpyakarādimān ayam*) arises; and immediately follows the perceptual experience "This is a man" (*ayam puruṣaḥ*). Such cases of *saṁśayottarapratyakṣa* (perceptual decision following a doubt) and arising from the reflective perception of certain particulars (*viśeṣaparāmarśa*) are not instances of *anumiti* and have to be excluded by the adjunct 'in association with the *pakṣatā*' (*pakṣatāsahakṛta*) so that the complete definition of *anumiti* will be this—"*Anumiti* is a cognition which is produced by subsumptive reflection in association with *subjectness* (*pakṣatā*)".

What is *pakṣatā* (*subjectness*)? The earlier school of Nyāya understood *subjectness* as consisting in 'doubt regarding the presence of *probandum*' (*sādhyasandeha*)—or, in other words, understood a *pakṣa* to be the substantive with reference to which one doubts whether one may correctly predicate something or not. This view of *pakṣatā* ignores the fact that *sādhyasandeha* (doubt regarding *prodandum*) is not a necessary condition of inference and that a person who has actually seen clouds on the sky may also infer their presence from their peal of thunder. The later Naiyāyikas seek to remove this defect in the earlier definition of *pakṣatā* and suggest a modified definition which may be stated thus:—"*Pakṣatā* (subjectness) amounts to the absence of such indubious knowledge of the *probandum* as is associated with the absence of a desire to establish the *probandum*" (*siṣādhayiṣāviraha-viśiṣṭasiddhyabhāvaḥ pakṣatā*). In experience, it is

found that indubious knowledge of the *probandum* (*sādhyasiddhi*) prevents inference unless there is a positive desire to arrive at the same result through inference. *Sādhyasiddhi* is thus a counteracting agent preventing *anumiti* (*anumitipratibandhaka*) and *siṣādhayiṣā* neutralises the influence of the counteracting agent and is therefore *uttejaka*. *Pakṣatā* thus reduces itself to non-existence of such counteracting agent as is associated with the absence of the neutralising agent (*uttejakābhāvaviśiṣṭam yat pratibandhakam tadabhāvaḥ*). When the Naiyāyikas include *pakṣatā* in the causal equipment necessary for *anumiti*, they do not assume anything unusual, but are simply applying to the specific effect, *anumiti*, the general principle that *uttejakābhāvaviśiṣṭapratibandhakābhāva* is one of the things making up the causal complement of an effect. It must be remembered that universal *sādhyasiddhi* in every conceivable instance of *pakṣa* prevents the inference of the same *sādhya* in some of the *pakṣas* as also in all *pakṣas*; whereas partial *sādhyasiddhi* in some *pakṣas* prevents only the inference of the same *sādhya* in some *pakṣas*. Universal *sādhyasiddhi* is technically described as *pakṣatāvacchedakāvacchedena sādhyasiddhi* and may be embodied in a proposition like this—" All S is P". Inference of the same *sādhya* in all *pakṣas* is likewise described as *pakṣatāvacchedakāvacchedena anumiti* and embodied in a proposistion like this—" All S is P". " Some S is P"—a proposition of this type embodies partial *sādhyasiddhi*, which is technically described as *pakṣatāvacchedakasāmānādhikaraṇyena sādhyasiddhi*.

An inference which may be embodied in a proposition like "Some S is P" is prevented by any *sādhyasiddhi*, universal or partial, while the inference in the form "All S is P" is prevented only by universal *sādhyasiddhi*. It should also be remembered that, when the conditions necessary for having the perception of a certain object are present along with those necessary for inferring the same object, only the perception of that object arises and not its inference; but in cases where the conditions necessary for perceiving an object are present along with those required for inferring another object, inference would arise and not perception.

The Naiyāyikas insist that, in every case of inference, quick or slow, inference for oneself or inference for others, subsumptive reflection (*parāmarśa*) is an indispensable antecedent and should, therefore, be treated as cause of *anumiti*. *Parāmarśa* is a complex cognition which arises from a combination of the knowledge of invariable concomitance (*vyāptijñāna*) and that of the presence of the reason (*hetu*) in the subject (*pakṣa*)—technically known as *pakṣadharmatājñāna*. In the stock example of inference—"The hill has fire; because it has smoke", the *parāmarśa* takes the form—"The hill has smoke, which is invariably concomitant with fire" (*vahnivyāpyadhūmavān parvataḥ*); and it is contended by the Naiyāyikas that, in the absence of such a *parāmarśa*, *anumiti* does not arise. This cognitive complex called *parāmarśa* is also known as *liṅgaparāmarśa* or *tṛtīyaliṅgaparāmarśa* (the third cognition of the reason). The cognition of the presence

of the *liṅga* (reason) in the subject (*pakṣa*) may be said to be the first *liṅgaparāmarśa*; the cognition of the invariable relation between *liṅga* and *sādhya* is the second *liṅgaparāmarśa*; and the complex cognition which arises from these two cognitions is the third *liṅgaparāmarśa.*

The Mīmāṁsakas and the Vedāntins who follow them hold that the complex cognition called *parāmarśa* is not indispensable for *anumiti,* though it may actually arise just before *anumiti* in many cases. In our experience, we are conscious of having *anumiti* directly after becoming aware of the presence of the *hetu* (reason) in the *pakṣa* (subject) and remembering *vyāpti* (invariable concomitance) and without any intervening *parāmarśa.* In such cases, the Naiyāyikas also cannot help recognizing causal relation (*kārya-kāraṇabhāva*) between *anumiti* on the one side and the two cognitions referred to on the other side (*vyāpti-jñāna* and *pakṣadharmatājñana*); and in cases where *parāmarśa* intervenes, they should recognize another causal relation (*kāryakāraṇabhāva*) between *parāmarśa* and *anumiti.* Thus the Mīmāṁsakas argue and maintain that, in order to avoid this difficulty, it would be necessary to treat *anumiti* as the effect of *vyāptijñāna* and *pakṣadharmatājñāna* and to exclude *parāmarśa* from the causal complement of *anumiti.* The Naiyāyikas, however, point out that it would be much simpler to connect every case of *anumiti* with *parāmarśa* as its cause and to assume that, even in cases where *anumiti* appears to arise directly from *vyāptijñāna* and *pakṣa-dharmatājñāna,* there is an intervening *parāmarśa* though one may not be conscious of it on account of the

quick passage of the mind from the stage of *pakṣadharmatājñāna* to the stage of inference. The controversy between the Mīmāṁsakas and Naiyāyikas, as to whether *anumiti* should be taken as the effect of the two cognitions—*vyāptijñāna* and *pakṣadharmatājñāna* or as the effect of the complex cognition called *parāmarśa*, appears to hinge on the principle of parsimony (*lāghava*) and turns out to be a consideration of the greater or smaller degree of cumbersomeness which one might notice in the Mīmāṁsaka's or the Naiyāyika's way of defining the causal relation between *anumiti* and its cause. However, a careful estimation of the arguments advanced by the Mīmāṁsakas and the Naiyāyikas would reveal the significance of the insistence in Nyāya on *parāmarśa* being treated as indispensable. If *subsumption* to a generalisation be the essential element in inference, it is obvious that inference of fire in a hill cannot arise from the perception of smoke in it, until the particular smoke in the hill is *subsumed* under the generalisation involving *vyāpti* between smoke and fire; and the Naiyāyikas insist that subsumption is the essential feature of inference and insist therefore that every *anumiti* should be taken to be preceded by *parāmarśa*, which is but a subsumptive reflection subsuming the smoke in the hill under the pre-established *vyāpti*. The Bhāṭṭa Mīmāṁsakas, on the other hand, hold that it is the *subsultive*, rather than the *subsumptive*, passage of the mind from the observed relation of particulars to a certain unobserved particular, that characterises the inferential process of thought; and this view accounts for their attitude

towards *parāmarśa.* From the following exposition of *vyāpti,* the difference between the views of the Mīmāṃsakas and the Naiyāyikas would become further clarified.

What is *vyāpti?* Annambhaṭṭa's definition of *vyāpti* is that it consists in the *hetu* (reason or *probans*) being co-existent with the *sādhya* (*probandum* or the thing to be inferentially established), which is *pervasive* of the *hetu* (*hetuvyāpaka*). To be pervasive (*vyāpaka*), in the context of *anumiti,* means 'never being the counter-correlative (*pratiyogin*) of a negation (*abhāva*) which is co-existent with *hetu.*' In an inference, where smoke is the *hetu* and fire is the *sādhya* to say that there is *vyāpti* (invariable concomitance) between smoke and fire implies the following things, according to this definition. Firstly, it implies that fire and smoke co-exist in the particular form and through the particular relation, with reference to which they are intended to be treated as *hetu* and *sādhya* respectively, the particular form of *hetu* and *sādhya* being technically called *hetutāvacchedakadharma* and *sādhyatāvacchedakadharma* and the particular relations intended to determine the co-existence of *hetu* and *sādhya* being technically known as *hetutāvacchedakasambandha* and *sādhyatāvacchedakasambandha.* Secondly, it implies that, with reference to the same *hetutāvacchedakadharma, sādhyatāvacchedakadharma, hetutāvacchedakasambandha* and *sādhyatāvcchedakasambandha,* fire is never the counter-correlative (*pratiyogin*) of any negation which co-exists with smoke. Where fire in a hill is inferred from smoke, fire is *sādhya,* fireness

(*vahnitva*) is said to be *sādhyatāvcchedakadharma* in the sense that fire is proposed to be treated as *sādhya* in its general and universal form as fire, and not in any other form such as that of a substance (*dravya*); smokeness (*dhūmatva*) is said to be *hetutāvacchedakadharma* in the sense that smoke is proposed to be treated as *hetu* in its general and universal form as smoke, and not in any other form; and conjunction or contact (*saṁyoga*) is said to be *sādhyatāvacchedakasambandha*, as also *hetutāvacchedakasambandha*, in the sense that *fire* and *smoke*, in their respective form as *sādhya* and *hetu*, are proposed to be treated as connected with *pakṣa* (subject), through the relation of contact, and not through any other relation such as inherence (*samavāya*) or self-linking relation (*svarūpa*).

In later Nyāya literature, based on Gaṅgeśopādhyāya's *Tattvacintāmaṇi*, two types of definitions of *vyāpti* are distinguished, one type being called *siddhāntalakṣaṇa* and the other type being called *pūrvapakṣalakṣaṇa* or *pūrvapakṣavyāpti*. The definition explained in the preceding para represents the former type and is briefly set forth in this Sanskrit formula:—*Hetuvyāpakasādhyasāmānādhikaraṇyam vyāptiḥ*. This definition, when fully amplified, comes to include the *hetutāvacchedakadharma*, *sādhyatāvacchedakadharma*, *hetutāvacchedakasambandha* and *sādhyatāvacchedakasambandha*. It is affirmative in its main form, the latter half being affirmative, though the adjunct *hetuvyāpaka* reduces itself to the negative form *hetusamānādhikaraṇātyantābhāvāpratiyogin* (which is

never the counter-correlative of any negation co-existing with the reason).

The other type of definition of *vyāpti* is known as *pūrvapakṣalakṣaṇa* in the sense that it is provisional and *prima facie* satisfactory. It is generally put in a negative form. A typical instance of *pūrvapakṣavyāpti* is this:—Co-extension (*vyāpti*) consists in non-existence of the probans in every place where the *probandum* (*sādhya*) does not exist (*sādhyābhāvavadavṛttitvam*). This definition also, when fully amplified, comes to include the *hetutāvacchedakadharma, sādhyatāvacchedakadharma, hetutāvacchedakasambandha* and *sādhyatāvacchedakasambandha*. This *prima facie* definition of *vyāpti* is negative in its main part and is a direct amplification of the conception of *avinābhāva*. The contrast between the two phrases *avinābhāva* and *sāhacaryaniyama* should be clearly understood. The former phrase is more commonly used in earlier Nyāya literature and the latter in later literature. *Vinā* means 'without'; *a-bhāva* means non-existence; and *a-vinā-bhāva* means non-existence (of the probans or *hetu*) without or in the absence (of the *probandum* or *sādhya*). This is the basis of *pūrvapakṣavyāpti* which is generally negative in its form. The other phrase *sāhacaryaniyama* which is used by Annambhaṭṭa is equivalent to *niyatasāhacarya*, which means invariable co-existence. This forms the basis of what is referred to above as *siddhāntavyāpti*. The *prima facie* definition of *vyāpti* set forth above is defective. It does not hold good in cases where the *sādhya* happens to be a

thing whose non-existence anywhere is inconceivable (*kevalānvayī*), like *abhideyatva* (namableness); nor does it apply to the *hetu* in syllogisms like:—"A quality (*guṇa*) has existence (*sattā*), because it has a generic attribute (*jāti*)". It will be seen that non-existence of the *probans* in a place where the probandum does not exist can be conceived of only when its existence in such a place through the specific relation in view (*hetutāvacchedakasambandha*) is conceivable and that, in the latter instance referred to, the presence of the *probans*, *jāti*, through the relation of inherence, which is the specific relation in view, in a place like *sāmānya* where the *probandum* (*sattā*) is not present, is inconceivable. In order to get over difficulties of this kind, the *siddhāntalakṣaṇa* or conclusive definition of *vyāpti* is put forward.

The term *vyāpti* literally means pervasion and lays stress on the *universal* character of the relation kept in view. The phrase 'universal connection' brings out exactly the meaning of the term *vyāpti*. In early Nyāya literature, the term *avinābhāva* is frequently used as the equivalent of *vyāpti*. It should be observed that this term, *avinābhāva*, brings into prominence the *invariable* character of the relation kept in view. The two concepts, *universality* and *invariableness*, imply each other; but they are not identical. A careful examination of early Nyāya literature would show that, from Kaṇāda and Gautama downward, all the leading exponents of the Nyāya-Vaiśeṣika system were quite familiar with the ideas of universality and invariable-

ness as forming the essential elements in the conception of *vyāpti*. Vātsyāyana, who preceded Dignāga, definitely makes use of the conception of *avinābhāva* in his Bhāṣya on the sūtras 2-2-1, 2-2-2 and 2-2-61. The very conception of *vyabhicāra* as a fallacy (*hetvābhāsa*) presupposes the invariableness of the relation called *avinābhāva* or *vyāpti*. Patañjali, in his Mahābhāṣya (on 3—2—124), shows a definite knowledge of the universal character of the relation called *vyāpti*. In the face of these facts, it would be unreasonable to hold, as Professor Keith does, that the doctrine of indissoluble or invariable relation (*avinābhāva*) is Dignāga's special contribution to Indian logic and that Praśastapāda and others borrowed this idea from Dignāga and developed it. In this connection, attention is invited to the article on "The evolution of *vyāpti*" contributed by one of my former pupils, Mr. A. S. Krishna Rao, M.A., in part I Volume I, (1927) of the Journal of Oriental Research, Madras.

What is the exact nature of the relation of *vyāpti*, or *avinābhāva*? How is it arrived at? Is it arrived at through perceptual experience? Or does it represent itself the result of an inferential process? If *vyāpti* in its universal form is the basis of inferential reasoning, does it not already contain in itself the result of the inferential process and does it not render inference wholly superfluous? Questions like these were raised and answered both by Naiyāyikas and Mīmāṁsakas of the early and later schools. It would be of great value to students of Indian logic to pay some attention to

these questions. Vātsyāyana remarks in his Bhāṣya on 1-1-37, that the parallelism between the *probans* as found in the *pakṣa* and the *probans* as found in the example (*udāharaṇa*), on which the probative character of the *probans* rests, is very subtle and difficult to explain and can be well understood only by men of great learning. (*Tadidam hetūdāharaṇayoḥ sādharmyam paramasūkṣmam duḥkhabodham paṇḍitarūpavedanīyamiti*). The *Bhāṣyakāra* says this, not because he was quite innocent of the nature of the invariable or universal relation called *avinābhāva* or *vyāpti*, as Professor Keith and some others may fancy, but because, perhaps, he was keenly alive to the difficulty in satisfactorily answering the questions raised at the beginning of this para and to the snares and pitfalls in the way of generalisation.

Uddyotakara, Vācaspatimiśra, Jayanta and some other early writers on Nyāya describe *vyāpti* as an *unconditioned* or *necessary* relation which is not brought about by any adventitious circumstance—*anaupādhikaḥ sambandhaḥ*. For instance, that smoke is pervaded by fire, *i.e.*, that *dhūma* is *vahnivyāpya* is a necessary and unconditioned relation and does not depend upon any adventitious circumstance; whereas, the relation of *vyāpti* embodied in the proposition—'Wherever there is fire, there is smoke'—is not a necessary and unconditioned relation and depends upon the association of fire with the adventitious contact of wet fuel with fire (*ārdrendhanasaṁyoga*). Such adventitious circumstances are called *upādhayaḥ*. An *upādhi* is an adventitious factor which is invariably concomitant with the *probandum*

(*sādhyavyāpaka*) and not so with the *probans* (*sādhanāvyāpaka*). It is called *upādhi* because as Udayana explains, its invariable concomitance with the *probandum* comes to be erroneously associated with the *probans*, just in the same way as the redness of a *japā* (China rose) is erroneously associated with a crystal (*sphaṭika*) in its vicinity. To define *vyāpti* as *anaupādhikasambandha* is significant in several ways. In the first place, it shows that the earlier schools of Indian logic, which adopted this definition, do not definitely insist upon any conscious process of generalisation or universalisation preceding inference. Secondly, according to the early schools, it should be made out that the connection between the *probans* (*hetu*) and *probandum* (*sādhya*) is *necessary*. Thirdly, in order to satisfy oneself that the connection in question involves necessity, one should know that it is not due to association with any adventitious circumstance, *i.e.*, that it is *svābhāvika* and not *aupādhika*. Further, this definition clearly lays greater stress on the element of necessity in the relation between the *hetu* and *sādhya* than on the element of invariableness. It should, however, be remembered, in this connection, that Gautama who recognised *vyabhicāra* or absence of invariableness as a fallacy, and Vātsyāyana and Praśastapāda who definitely referred in their works to the concept of *avinābhāva* as an essential element in *anumāna*, were fully alive to the importance of the idea of invariableness in *vyāpti*.

What is the form in which the relation of *vyāpti* comes to be known and leads to inference? How does

it come to be known? According to Annambhaṭṭa, who follows Gaṅgeśopādhyāya in this as in several other matters, the cognition of *vyāpti* (*vyāptijñāna*) arises in the form of a universal generalisation which is usually embodied in the proposition—"Wherever there is smoke there is fire" (*yatra yatra dhūmaḥ tatra vahniḥ*), or in the proposition—"Whatever has smoke, has fire" (*yo yo dhūmavān so'gnimān*); in a statement of *vyāpti*, the *vyāpya* (pervaded) should be first referred to and the *vyāpaka* should be the principal predicate; and the cognition of *vyāpti* arises usually from the observation of the co-existence of smoke and fire in one or more instances, in the absence of any knowledge of a place where the *hetu* is present and the *sādhya* is not present. Annambhaṭṭa criticises the view that the relation of invariable concomitance is known through *bhūyodarśana* or repeated observation. As Nīlakaṇṭha points out, the Sanskrit phrase *bhūyodarśana* is ambiguous. It may refer to the frequent repetition of the same observation or to observation of several instances of the *sādhya* and *hetu* or to observation of the co-existence of the *sādhya* and *hetu* in several places. In any of these senses, though the observation of the co-existence of *hetu* and *sādhya* may be repeated a thousand times, *vyāpti* cannot be made out, if, even in a single instance, the *hetu* is known to be present in the absence of the *sādhya*. So, following the *Maṇikāra*, Annambhaṭṭa points out that a knowledge of the co-existence of the *hetu* and *sādhya* in association with the absence of a knowledge of the presence of the *hetu* where the *sādhya* is not present (*vyabhicārajñānavirahasahakṛtam saha-*

cārajñānam) causes *vyāptijñāna*. Knowledge of *vyabhicāra* may arise in the form of a doubt or one may be sure of the presence of this defect. In the latter case, unless it is shown that such knowledge is erroneous, one cannot make out the relation of *vyāpti*. In the former case, any doubt, of *vyabhicāra*, which is otherwise technically known as *aprayojakatvaśaṅkā* and which is usually expressed in the form "Let there be the *hetu*; the *sādhya* need not be present" (*heturastu sādhyam māstu*), is removed by an indirect type of reasoning known as *tarka*. The indirect argument called *tarka* corresponds to *reductio ad absurdum* and consists in showing how the assumption of the opposite leads to an absurd result by coming into conflict with some established truth. In the case of invariable concomitance between smoke and fire, for instance, if one should doubt that smoke may be present somewhere in the absence of fire, the indirect argument of *tarka* may be put forward in this form:—'If smoke were present in the absence of fire, smoke could not be produced by fire. But the causal relation between fire and smoke is a well-recognized fact'. Thus according to later Naiyāyikas, *vyāpti* is a universal type of generalisation covering all conceivable cases, both observed and unobserved. The element of invariableness is of greater value than the element of necessity, in ensuring the safe passage of inferential thought from the known to the unknown, though these two elements—invariableness and necessity—imply each other. The element of necessity looms large only at the stage at which the

element of invariableness happens to be challenged and comes to be maintained by a suitable *tarka*.

In several instances the universal relation of *vyāpti* is felt to be arrived at as perceptual experience (*pratyakṣa*) through some sense-organ. Perceptual experience persupposes some *sannikarṣa* (sense-relation) between the sense concerned and the objects coming within the scope of the experience in question. When, for instance, one comes to have visual perception of the relation of invariable concomitance between all smokes and all fires, it is through the super-normal sense-relation (*alaukika-sannikarṣa*) called *sāmānyalakṣaṇa-pratyāsatti* that all the smokes and fires are brought within the reach of the visual sense. The nature of this super-normal sense-relation is explained in pages 180 to 184 of Chapter I, *supra*. Thus, according to later Naiyāyikas, the knowledge of *vyāpti* arises in several cases as super-normal perception through the super-normal sense-relation of sense-bound generality (*sāmānyalakṣaṇasannikarṣa*). Jayantabhaṭṭa discusses the nature of *vyāptijñāna* in pages 121 to 123 of his Nyāyamañjarī (Viz. S. S.) and arrives at the conclusion that it arises through the inner sense, *manas*, as mental perception (*mānasapratyakṣa*), when co-existence is observed and no hitch in such co-existence is seen. Evidently, Jayantabhaṭṭa is inclined to think that *manas*, though it cannot directly reach external objects (*bahirasvatantram manaḥ*) under ordinary circumstances, is resourceful enough to reach all the smokes and fires, both observed and unobserved, in the

absence of definite obstacles in the way. Jayanta, however, does not account for the mind's resourcefulness in this direction and seems to be inclined to attribute it to its nature and not to the aid of any super-normal sense-relation known as *sāmānyalakṣaṇasannikarṣa*. The nature of this *sannikarṣa* has been explained in detail on pages 180 to 184, in Chapter I, *supra*.

Buddhist logicians like Dignāga and Dharmakīrti lay particular stress on the negative phase of *vyāpti*—*viz.*, non-existence of the *probans* in the absence of the *probandum* (*avinābhāvā*). They hold that every case of *avinābhāva* involves a *necessary* and *indissoluble* connection between the *hetu* and the *sādhya* and that this connection is based upon identity (*tādātmya*) or causality (*tadutpatti*). The Naiyāyikas rightly criticise this view as ignoring such cases of invariable concomitance as do not rest upon identity or causality—cases like a blind man's inference of colour (*rūpa*) from taste (*rasa*).

The Mīmāṁsakas of the Bhāṭṭa school maintain that *vyāpti*, in the form of a universal generalisation, is not a necessary condition of inference. Fire is observed to be co-existent with smoke in two or three places; and smoke is never seen to be present in a place where fire is not present. When one comes to have this experience repeatedly within the sphere of one's observation, one finds oneself in a position to make out invariable connection between smoke and fire in the form in which they happen to be seen in the particular instances which have come within the scope of one's

observation. When one later on happens to see smoke in the same form in an unobserved place as in a place already observed, or even when one happens to see smoke again in the same form in an observed place as already observed there, one's mind comes to have a knowledge of the presence of fire in that place where smoke is seen for the moment. The knowledge of fire which thus arises cannot be regarded as perceptual experience as fire is not for the moment within the range of any of the senses; nor can it be regarded as reproduction in memory of a past experience, since the knowledge of fire which thus arises is felt to be experience having reference to the existence of fire in the present time. Thus, according to the Bhāṭṭas, the proposition 'Wherever there is smoke, there is fire' represents ordinarily a restricted form of synthesis which has reference only to the observed particulars and is quite adequate as a condition of inference; and anybody who is equipped with the knowledge embodied in this proposition would be able to infer the existence of fire on seeing smoke in any place, provided there is no suspicion of *vyabhicāra* (presence of *hetu* in the absence of *sādhya*). At the same time it must be remembered that Bhāṭṭas do not deny that, not infrequently, in the course of inferential reasoning, one may arrive at a universal generalisation of the type recognized by the Naiyāyikas, which has reference to the invariable concomitance between all cases of *hetu* and *sādhya*, including observed and unobserved instances in the present, past and future. The Bhāṭṭas, however, insist that such universal generalisations themselves are

cases of inference. Pārthasārathimiśra, one of the most reliable exponents of Kumārila's views, explains the inferential process through which such universal generalizations are arrived at. In this connection, a reference to Pārthasārathi's Nyāyaratnamālā (Chowkhamba edition—pages 69 and 70) would show how unobserved places, which have smoke, may be inferred to have fire, from the fact that smoke is predicated in those places, on the basis of observed cases. In the face of this, it would not be correct to suppose, as Professor Randle does in foot-note (1) to page 282 of his work—"Indian Logic in the Early Schools", that "there is nowhere in Indian Logic the notion that Induction or generalization is an inferential process".

The Prābhākaras hold that *vyāpti* is the invariable relation between *hetu* and *sādhya*, which, when it is made out, happens to be free from temporal and spatial limitations and thus comes to assume the form of a universal generalization. In the hearth, for instance, contact between smoke and fire is made out as the relation connecting the two substances—smoke and fire. In the cognition of such relation, the two relata are the two principal concepts. The relation on the one side and time and space (*kāla* and *deśa*) on the other are presented in that cognition only as adjuncts subsidiary to the two relata. While two subsidiaries agree to subordinate themselves to a common principal, one subsidiary does not ordinarily tolerate its subordination to the other subsidiary. This is as true in the sphere of thought as in the external world. Thus the knowledge of the relation between smoke and fire that

arises from the observation of their co-existence in particular instances takes a universal form, unhampered by the temporal and spatial limitations of the particular place and time actually coming within the scope of observation. With the help of such a universal generalization, when a person infers fire in a mountain on seeing smoke there, he is, in fact, cognizing again what has already been cognized and forms part of the content of the generalization at which he arrived as a result of his observation. Such inference is valid experience (*pramā*), though it cognizes something already cognized. According to the Prābhākaras, all cognitions other than recollection are valid (*pramā*) and it is not necessary that a *pramā* should cognize something not already cognized. Thus, the Prābhākaras maintain that inferential experience is *re-experience* and does not involve the passage of the mind from the known to the unknown, as is commonly supposed to be the case; but it involves merely the passage of the mind from a known object to something that is already known to be invariably connected with it. In the Prābhākara scheme of inference, even a single observation (*sakṛd-darśana*) is enough for having a knowledge of *vyāpti* and repeated observation (*bhūyodarśana*) is, however, useful in showing that the relation observed between *hetu* and *sādhya* is not brought about by any adventitious circumstance (*upādhi*).

From the foregoing account it will be seen that all the leading schools of Indian philosophy are agreed in a general way that generalization (*vyāptijñāna*) repre-

sents the ground-work of inference. The Naiyāyikas and the Prābhākaras take this generalization to be of a universal type and to have reference to all the conceivable particulars—unobserved as well as observed. The Bhāṭṭas look upon this generalization as a synthesis confined to the observed particulars, which is arrived at by sinking all incompatible differences. For instance, according to the former, the generalization, "Wherever there is smoke there is fire" has reference to every conceivable case of smoke and fire; while, according to the latter, this generalization represents a synthesis of all the observed cases and sinks such incompatible differences as are due merely to spatial and temporal limitations.

At a very early stage in the history of Indian logic, the Cārvāka materialist, who recognizes only one *pramāṇa*—viz., *pratyakṣa*, throws out against inference, the challenge that *vyāpti* cannot be relied upon as the basis of *anumāna*. The Cārvāka's contention is that, if *vyāpti* were to be restricted to the known or observed particulars, it would be impossible to have any inference regarding unknown or unobserved particulars for the simple reason that the latter are wholly different from the former; and that, if *vyāpti* were to be looked upon as a universal generalization having reference to all the conceivable particulars, unobserved as well as observed, all that has to be known is already known and nothing remains to be known through inference. This objection is embodied in an old verse which is quoted by several old philosophical writers like Śālikanātha and Jayanta and which runs thus:—

" *Anumābhaṅgapaṅke'smin nimagnā vādidantinaḥ. Viśeṣe'nugamābhāvaḥ sāmānye siddhasādhyatā.*" (*Vide* Prakaraṇapañcikā—Benares edn. Page 71). The Cārvākas contend that Indian logicians are hopelessly caught between the two horns of the dilemma indicated—they hopelessly sink down in this slough in which *anumāna* is lost. Students of western philosophical literature are here likely to be reminded of the Empiricist's objection that any inference of a particular fact from a general principle already known and taken to be valid would amount to arguing in a circle. They may think in this connection of objections similar to what is put forward by Mill when he says "that no reasoning from generals to particulars can, as such, prove anything; since from a general principle, we cannot infer any particulars but those which the principle itself assumes as known."

To this kind of objection, the logic of the Bhāṭṭa school, as may be evident from their view set forth above, gives the answer that inference is really from particulars to particulars and that, in cases where it appears to be from a *universal* to particulars, the real cause of such appearance is to be found either in the fact that *vyāpti*, constituting the basis of inference, assumes a general form, since such differences as are immaterial, or incompatible, are left out for the time being; or it is to be found in the fact that a universal generalization interposes itself, though it does so as an *intermediate inference*. In this connection, a reference to Bradley's Principles of Logic (pages 323 to 326) would

be of great value. One may easily see that Bradley's criticism of Mill's view holds good as against the Bhāṭṭa view also, in a considerable measure. The Bhāṭṭa logic, where it insists upon a very close similarity between the *probans* in the *pakṣa* and the *vyāpya* in the *sapakṣa* (example), reduces inference to reasoning from resemblance. But where it insists upon differences being left out, the reasoning turns out to be one from identity. Is it not then palpable, one may ask in Bradley's language, that, when the differences are disregarded, the residue is a universal? The strong point in the Bhāṭṭa view is that it shows how inference may really involve an advance in knowledge in two directions:—where one infers unknown particulars from known and where one inferentially arrives at a universal generalization from the observation of particular instances.

As already explained, the Prābhākaras get over the difficulty under consideration by saying that every experience (*anubhava*) though it may not involve any new element or any advance in knowledge, is valid (*pramā*). All that is required to show that *anumāna* is a *pramāṇa* is that inferential cognition (*anumiti*) resulting from it is an experience (*anubhava*), and not mere recollection (*smṛti*). The Prābhākaras do not consider it necessary to go beyond maintaining that *anumiti*, though it happens to be a re-experience (*gṛhītagrāhī anubhavaḥ*), is a valid experience. It should, however, be remembered that, according to them, *vyāpti* assumes the form of a universal generalization; and this is not because every

conceivable particular is brought within the scope of a supernormal observation, as the Naiyāyikas contend, but because the elements of time and space do not enter into the scheme of relation represented by *vyāpti*, for the reason already indicated.

The Naiyāyikas, who are the generally accredited exponents of the doctrines of Indian logic, maintain that inference is not from particulars to particulars but it is from universal to particulars. They hold that *vyāpti* is a universal generalization which does not represent a mere summation of the observed instances. It has reference to the invariable concomitance between all conceivable cases of *hetu* and *sādhya*. Such a generalization, though it involves a big leap from the few observed cases to innumerable unobserved cases, is rendered possible through the super-normal sense-relation called *sāmānyalakṣaṇasannikarṣa*. Leaving out the technical concept of *alaukikasannikarṣa*, one might well say that such a big inductive leap is rendered possible by the immense resourcefulness of a disciplined mind in the direction of synthesis. The Nyāya theory of inference effectively exorcises the ghost of *petitio principii*, by drawing attention to the fact that inference helps one to see and understand more. One may be equipped with the universal generalization—"Wherever there is smoke there is fire" and yet may be quite unaware of the presence of fire in a particular mountain; and on seeing smoke in that mountain, the presence of fire may be inferred there. In such cases, inference leads to a distinct addition to knowledge and

helps one to see more. The Naiyāyikas also point out that, after acquiring definite knowledge of a certain thing in a certain place through observation or by some other means, the same thing may be inferred in the same place; and in such cases, inference helps one to understand more by enhancing the degree of clarity or certitude in the knowledge already got.

32—T

(*a*) Inference is of two kinds:—inference for oneself and inference for others.

(*b*) Inference for oneself causes one's own inferential experience. For instance, a person may make out the relation of invariable concomitance between smoke and fire and arrive at the universal generalization—"Wherever there is smoke there is fire" from his repeated observation in the hearth and such other places and then approach a mountain. He may have doubt as to the presence of fire in that mountain. On seeing smoke there, he remembers the generalization—"Wherever there is smoke there is fire." Then, he comes to have the cognition—

"This mountain has smoke which is pervaded by (or invariably concomitant with) fire." It is this cognition that is called *liṅga-parāmarśa* (the subsumptive reflection of the *probans*). From this cognition arises the inferential cognition—"The mountain has fire". This is what is called *inference for oneself*.

(*c*) *Inference for others* is the syllogistic expression which consists of five members and which a person employs after inferring for himself fire from smoke, with a view to enabling another person to have likewise the same kind of inferential cognition.

E.g.—"The mountain has fire; because it has smoke; whichever has smoke has fire, as a hearth; the mountain is such (has smoke which is invariably concomitant with fire); and therefore, it is such (has fire)." From this five-membered syllogism, the other person to whom it is addressed comes to know the *probans* (smoke) and infers fire from it.

Professor Keith and some others believe that the above distinction of inference into *inference for onself* (*svārtha*) and *inference for others* (*parārtha*) was first introduced by Dignāga and borrowed from him by Praśastapāda. (*Vide* Professor Keith's 'Indian Logic and Atomism', pages 106 to 108). A careful consideration, however, of what Vātsyāyana says in his Bhāṣya and Gautama in his Sūtras would clearly show that the distinction in question should be held to be at least as old as the Sūtrakāra himself. Vātsyāyana, where he speaks of *anumāna* as distinct from *nyāya-prayoga*, presupposes evidently the distinction of *svārtha* and *parārtha*. Gautama's description of the five members of a complete syllogistic expression would be unintelligible, should it be assumed that he was not familiar with the substance of the distinction in question, though the terms *parārtha* and *svārtha* are not found used in his Sūtras.

The distinction of *anumāna* into *svārtha* and *parārtha* is not only as old as the Nyāyadarśana itself, but it is also one of the most vital topics in the Nyāya system. It is a natural result of one of the distinctive features of Indian logic and it enables intelligent critics to appreciate duly the pivotal idea on which Indian logic turns both in its scope and its development. It should be remembered here that Indian logic never allowed itself to be restricted in its scope and development to the exclusively formal side of ratiocination, but always kept in view as its constant, knowledge or, more accurately, knowledge of truth (*tattvajñāna*) in

relation to what is conceived of as the *summum bonum*. In this connection, it would be very interesting to consider what Benedetto Croce, one of the greatest contributors to contemporary philosophical thought, has chosen to observe concerning Indian logic, particularly the distinction of *svārthānumāna* and *parārthānumāna* recognised in Indian logic. Attention is invited to the subjoined extract from pages 583 to 585 of Benedetto Croce's 'Logic as the Science of Pure Concept'—rendered into English by Douglas Ainslie.

"This error, which appeared very early in our western world, has spread during the centuries and yet dominates many minds; so true is this that 'logic' is usually understood to mean 'illogic' or 'formalist logic'. We say our western world, because if Greece created and passed on the doctrine of logical forms, which was a mixture of thoughts materialised in words and of words become rigid in thoughts, another logic is known which, as it seems, developed outside the influence of Greek thought and remained immune from the formalist error. This is *Indian logic*, which is notably antiverbalist . . . . . . Indian logic studies the naturalistic syllogism *in itself*, as internal thought, distinguishing it from the syllogism *for others*, that is to say, from the more or less usual, but always extrinsic and accidental forms of communication and dispute. It has not even a suspicion of the extravagant idea (which still vitiates our treatises) of a truth which is merely syllogistic and formalist and which may be false in fact. It takes no account of the judgment, or rather it considers what is called judgment, and what is really

the proposition, as a verbal clothing of knowledge; it does not make the verbal distinction of subject, copula and predicate; it does not admit classes of categorical and hypothetical, of affirmative and negative judgments. All these are extraneous to logic, whose object is the constant, "*knowledge considered in itself*."

Students of philosophical literature in the west may find it easy to appreciate, in the light of the above extract, the significance of the distinction which Indian logic recognizes between 'inference for oneself' (*svārtha*) and 'inference for others' (*parārtha*). This distinction is not merely one of a formal kind. It is rooted firmly on the fundamental doctrine of Indian logic that syllogistic reasoning should be viewed, not apart from the inductive process of thinking, but merely as a continuation and methodical application of it. In Indian logic, deduction and induction do not represent two mutually exclusive types of inference but they should always be looked upon as inseparably connected parts of a complete process of thinking called inference (*anumāna*); and the chief function of *anumāna*, as a means of valid cognition, is to enable one to realize how certain facts are inseparably and necessarily connected with each other in accordance with a general principle. This view of inference influenced the development of Indian logic for good and saved it from falling into the grip of formalism which, till very recently, dominated logic in the west. One of the chief advantages which have accrued to Indian logic from this view is that it never makes the extravagant

claim that *formal validity* may be viewed apart from, and independently of, *material validity*.

A complete syllogistic expression is called *nyāya-prayoga* by Vātsyāyana and all the Naiyāyikas who followed him. It is a synthesis in expression (*mahā-vākya*) built up by five parts or members (*avayavāḥ*), each of which embodies a judgment forming a necessary part of a complete ratiocinative process, expressed in words in order to demonstrate a fact by bringing it into an established scheme of universal and invariable relation. The Nyāya doctrine of five-membered syllogism is at least as old as Gautama and accepted by Vātsyāyana and Praśastapāda, and almost all the later Naiyāyikas and Vaiśeṣikas. These five members are described in the following section of the text.

T—33

(a) The five members of a syllogism are:—(1) the thesis set down (*pratijñā*), (2) the reason (*hetu*), (3) the exemplification (*udāharaṇa*), (4) the subsumptive correlation (*upa-naya*) and (5) conclusion (*niga-mana*); *e.g.*—"The mountain has fire"—this is the *thesis*. "For it has smoke"—this is the *reason*. "Whichever has smoke has fire, as a hearth"—this is the *exemplification*. "And so is this"—this is the subsumptive *correla-*

tion. "Therefore it is such"—this is the *conclusion.*

(6) In the case of inferential cognition for oneself as well as that for others, it is the subsumptive reflection of the reason (*liṅgaparāmarśa*) that serves as the efficient and special cause (*karaṇa*). So, *liṅgaparāmarśa* in this sense is the instrument of inferential cognition (*anumāna*).

Annambhaṭṭa's illustrative description of the five members of a syllogism set forth above, read together with the remarks in the *dīpikā,* throws adequate light on the function of each of the members. A typical *pratijñā* is in the form of a proposition consisting of a subject (*pakṣa*), which is already known specifically to both the parties in a discussion, and a predicate which, in a specific form, is proposed to be established in the subject; in other words, it is in the form of a definite thesis to be maintained. Its chief purpose is to bring about a definite knowledge of the *pakṣa* as such or what is proposed to be proved as having the *probandum* (*sādhya*). The person to whom the *pratijñā* is addressed would naturally desire to know first the reason why the *pakṣa* is said to have the *sādhya*; and to satisfy this desire, the *liṅga* or the reason which serves to establish the *sādhya* in the *pakṣa* is indicated ordinarily by a term in the ablative case in Sanskrit. It would be possible to satisfy oneself that the reason

(*liṅga*) adduced is capable of proving the *sādhya*, only after ascertaining that the former is invariably concomitant with the latter; and the needed knowledge of the invariable connection between the *probans* and the *probandum* (*vyāptijñāna*), on which the probative capacity of the *probans* depends, is derived from the statement of the example, which is usually in a form like this:—"Whichever has smoke has fire, as a hearth." The *probans* which is made out to be invariably concomitant with the *probandum* (*sādhyavyāpya*) should be specifically known to be present in the *pakṣa*; without such a knowledge, the subsumptive process of thought on which the conclusion rests would not be complete; and such a knowledge results from the member called subsumptive correlation (*upanaya*). The final statement of the conclusion called *nigamana* is not a purposeless reiteration of the thesis, as proved. The purpose of the *nigamana* is to indicate that the *probans* is not vitiated by the presence of a *counter-probans* proving the contrary (*asatpratipakṣitatva*), nor stultified by a stronger proof (*abādhitatva*). According to Gautama and his followers, these five members are called *avayavāḥ* in the sense that they form the necessary parts of a complete syllogistic expression. Vātsyāyana, in his Bhāṣya, refers to and rightly discards an earlier view that the total number of *avayavas* is ten—*viz.*, a desire to know the *probandum* (*jijñāsā*), doubt regarding the *probandum* or its reverse (*saṁśaya*), belief in the probability of the *probandum* and in the probativeness of the proof (*śakyaprāptiḥ*), the object of discussion (*prayojana*)

and the removal of doubt on proving the *probandum* (*saṁśayavyudāsa*), in addition to the five members of the Nyāya syllogism already mentioned. Of these ten, the first five are only psychological conditions which lead to a discussion and they cannot, in any sense, be said to be logical propositions forming the parts which constitute a complete syllogistic expression. It may be noted here that the Vaiśeṣika tradition, as recorded by Praśastapāda uses the terms *pratijñā, apadeśa, nidarśana, anusandhāna* and *pratyāmnāya* as the respective equivalents of the Nyāya terms *pratijñā, hetu, udāharaṇa, upanaya* and *nigamana*.

Vātsyāyana, the author of the Nyāyabhāṣya, in his Bhāṣya on the first Sūtra, equates *nyāya* with *anvīkṣā*, and explains it as amounting to a critical investigation of facts by means of instruments of valid cognition (*Pramāṇairarthaparīkṣaṇam nyāyaḥ*). When such investigation is carried on in a methodical way so as to convince another person of a fact, it is expressed in the form of five-membered syllogistic expression which is described as *nyāyaprayoga* or *pañcāvayavavākya*. Vātsyāyana further explains, in his Bhāṣya on 1-1-1 and 39, how all the four Pramāṇas accepted by the Naiyāyikas meet in the five-membered syllogism and tend to demonstrate a fact in a conclusive manner. The Bhāṣyakāra points out that the statement of the thesis (*pratijñā*) may be taken to stand for valid verbal testimony (*śabda*), the reason (*hetu*) for the instrument of inference (*anumāna*), the example (*udāharaṇa*) for the instrument of perception (*pratyakṣa*) and the subsumptive correlation (*upanaya*) for analogy (*upa-*

māna). According to him, one should find in the conclusion (*nigamana*) the culminating stage of demonstrative expression for the reason that it is *nigamana* that shows how all the four *pramāṇas* have collaborated to maintain conclusively the fact in question; and on this ground, *nigamana* is described as the acme of logical demonstration (*paramo nyāyaḥ*). In order to appreciate fully the significance of the Bhāṣyakāra's account of *nyāyaprayoga* as represented by the five-membered syllogistic expression described above, it should be remembered that the Naiyāyikas, from Gautama downward, look upon logic both as a science and art, that the function of logic, according to them, comprises both discovery and proof, induction and deduction, and lays adequate stress on the material and formal aspects of reasoning; and that logical debate, even in its apparently non-logical forms of *jalpa* (successful advocacy) and *vitaṇḍā* (destructive objection), is never allowed to stand completely divorced from the aim of *nyāya, viz.*, conclusive determination of truth (*tattvādhyavasāya*). Remembering these facts, one may easily see that the structure of the five-membered syllogism is designed to meet in an adequate manner the requirements of logical demonstration, which seeks to convince another person by drawing his attention specifically to fact and by enabling his mind to pass through successive stages of thought which conclusively establish that fact. Professor Randle is inclined to believe that Vātsyāyana thinks of the five-membered syllogism "as more than inference or the expression in words of inference" and that "the five-membered formula was influenced by its historical

origin in a *nyāya* which was methodological rather than logical and its structure must be regarded as in part vestigial, rather than determined by the requirements of logical analysis." (*Vide* pages 165 to 167 of Professor Randle's book 'Indian Logic in the Early Schools'). The learned Professor's estimate of the five-membered syllogism of Nyāya and his interpretation of Vātsyāyana's remarks in this connection can hardly be said to have given due weight to the fact that Indian logic, particularly in its early stages as exhibited in the Sūtras of Gautama and the Bhāṣya of Vātsyāyana and in the connected early literature, never allowed valid *anumāna* (inference) to be divorced from other Pramāṇas, at any rate from the more important of them, *viz.*, perceptual instrument (*pratyakṣa*) and credible verbal testimony (*śabda*), and that syllogistic formalism abstracted from induction is an aberration unthinkable to the Naiyāyikas. A careful consideration of these facts would show that the structure of the five-membered formula need not be regarded as in part vestigial. On the contrary, the considerations indicated above would show that this formula is based on an efficient and self-contained type of verbal apparatus which logical methodology has evolved for the purpose of demonstration. Professor Randle further observes that "either *hetu* or *upanaya*, and either *pratijñā* or *nigamana* are superfluous and this superfluity is inherited from the time when the Nyāya was a method of debate and not yet a syllogism: and in the case of the Nyāya school, the convention of five members may have been fixed by a desire to equate the four 'premises'

with the four Pramāṇas." If syllogistic expression, like any other expression, directly or indirectly presupposes a hearer to whom it is addressed, if *nyāyaprayoga* or syllogistic expression finds a place only in inference for others (*parārthānumāna*), and if the process of reasoning in inference for oneself (*svārthānumāna*) is not syllogising, a strictly logical debate, as recognized by Gautama and his followers, must involve a self-contained syllogistic expression as its main part. The aim of such a self-contained syllogism is to enable the hearer, *first* to specifically think of what has to be demonstrated, *secondly* to learn what the reason is, *thirdly* to understand how the universal and invariable relation which forms the basis of inference is arrived at through observation, *fourthly* how the reason actually relied upon is identical with what is known to be invariably concomitant with the *probandum*, and *fifthly* to realize that the *probandum* is conclusively proved by a *probans* which is not vitiated by a *counter-probans* or by a stultifying proof. As already indicated, these five requirements can be fully met by the five members of a syllogism, *viz.*, *pratijñā*, *hetu*, *udāharaṇa*, *upanaya* and *nigamana*. It wll be seen from this that the five-membered syllogism of Gautama, far from comprising any superfluous member, is the only complete form of syllogistic expression which would enable a hearer's mind to pass in a methodical way through each of the five stages of demonstrative reasoning, as indicated above.

The Nyāya theory of five-membered syllogism may here be compared with the theory of *three* members

(*avayavāḥ*) put forward by the Mīmāṁsakas and the Buddhist theory of *two* members. The Mīmāṁsakas maintain that either *pratijñā, hetu* and *udāharaṇa,* or *udāharaṇa, upanaya* and *nigamana* will do; for, the conclusion should be specifically stated and a knowledge of the general relation between the *probans* and the *probandum* and of the presence of the *probans* in the *pakṣa* (*vyāpti* and *pakṣadharmatā*) is necessary, and these requirements are fully met by the three members above-mentioned. The Buddhists hold that syllogistic expression is only an aid to reasoning and that it would be unreasonable to assume that any hearer endowed with the minimum capacity for reasoning would require more than the members conveying the needed information about *vyāpti* and *pakṣadharmatā*, and that the two members necessary for that purpose, *viz.*, the example and the subsumptive correlation (*udāharaṇa* and *upanaya*) would be quite adequate to form a syllogism. It may also be noted here that the three-membered syllogism of the Mīmāṁsakas, represented by the latter alternative, *viz., udāharaṇa, upanaya* and *nigamana,* may be regarded as a close parallel to the Aristotelian syllogism of the *Barbara* mood. The Naiyāyikas would criticise the three-membered syllogism of the Mīmāṁsakas and the two-membered syllogism of the Bauddhas as incomplete and truncated, for the former, when it consists of *pratijñā, hetu* and *udāharaṇa* omits to make provision for equating the *probans* in the *pakṣa* with the *vyāpya* and for obviating any possible suspicion of a *counter-probans* or a stultifying proof (*satpratipakṣatva* or *bādha*); while, in the form which consists of

udāharaṇa, upanaya and *nigamana*, it startles the hearer by a generalization without adequately preparing him; and the latter adopted by the Bauddhas combines all these defects.

It may be noticed that all the schools of Indian logic—the Nyāya, Mīmāṁsā, Bauddha and the other schools—agree in regard to the importance and value of the example (*udāharaṇa*) as a member of syllogistic expression. Ordinarily, *udāharaṇa* is in a form like this—"Whichever has smoke, has fire, as the hearth." Its aim, according to the Naiyāyikas, is to show how the generalization on which deduction rests is arrived at. Consistently with this aim, the former part refers to the universal connection between the *probans* and the *probandum* and the latter part refers to a typical instance in which the co-existence between the *hetu* and *sādhya* may be observed. Nyāya tradition, which must have influenced Gautama's mind when, in his Sūtra 1-1-5, he proceeds to give an account of the different classes of *anumāna* after referring to it as *tatpūrvakam* (presupposing or resting upon *pratyakṣa*), should have also left its stamp, in the shape of specific instance, on the pivotal part of the five-membered syllogism, *viz.*, *udāharaṇa*. Some writers on Indian logic, who lose sight of the distinctive features of the Nyāya doctrine of syllogism, regard the *udāharaṇa* as a useless and clumsy excrescence. Some others would historically account for the present form of the *udāharaṇa* by treating it as result of the portion expressing the generalization (*vyāpti*) coming to be combined at a later stage in the history of Nyāya with the latter portion referring

to a specific instance, the original form of *udāharaṇa* being merely like this:—*as a hearth* (*yathā mahānasaḥ*). It may, however, be pointed out here that if Gautama's Sūtra defining *udāharaṇa* (1-1-36) is correctly interpreted, it cannot be held to convey anything other than this:—that *udāharaṇa* is a typical instance (*dṛṣṭānta*) which, on the strength of the invariable connection observed in it between the *probans* and the *probandum*, enables one's mind to pass in the *pakṣa* from a similar case of the *probans* to a similar case of *probandum*. If it is true that, from the days of Gautama, the inductive basis of deductive reasoning has been treated by the Naiyāyikas as an integral part of a complete syllogism, it must be accepted that the *udāharaṇa* as known to Gautama and his followers comprises both the parts, *viz.*, the part representing *vyāpti* and the part referring to a typical instance, and neither the former nor the latter of these two parts can be held to be a later addition. The logic of Nyāya seeks to combine discovery and proof; the Nyāya syllogism is such a harmonious blend of induction and deduction as ensures the safe progress of thinking on right lines; and if, sometimes, the syllogism of Nyāya is abused in Indian philosophical speculation, it is certainly due to the fact that the basis of syllogistic reasoning in such cases turns out to be a superficial or unsound induction and not to any defect in the scientific method of reasoning formulated by the Naiyāyikas.

Students of western logic, when they compare the Nyāya syllogism with Aristotelian syllogism, are not likely to miss the striking contrast between

them. This contrast consists in the Nyāya system not recognizing anything really corresponding to the syllogistic figures and moods known to western logic. Ordinarily, the generalization on which the typical Nyāya syllogism rests is a *universal affirmative* proposition, the proposition corresponding to the minor premise is usually stated in the form of A and the conclusion is also usually in A. So, it may be said that the typical Nyāya syllogism is of the *Barbara* type. In this connection, a student of Nyāya, familiar with the distinction made in Nyāya literature between *pakṣatāvacchedakasāmānādhikaraṇyenānumiti* and *pakṣatāvacchedakāvacchedenānumiti* may feel that there is some reason to find in the former case a conclusion in I and to connect such conclusions in I with a minor premise in I; thus, in such cases, he may feel inclined to find instances of the mood represented by *Darii*. In the same way, one may be inclined to find an instance of the mood *Camestres* in a syllogism like this —"Whichever has negation of fire has negation of smoke. No tank has fire. No tank, therefore, has smoke". But a careful consideration of the Nyāya theory of syllogism in the light of the Nyāya view regarding the interpretation of propositions would make it clear that, strictly speaking, it would not be correct to find in any Nyāya syllogism, a parallel to any western figure or mood. The Nyāya conception of a typical syllogism is that it depends chiefly upon a proposition embodying *vyāpti*. *Vyāpti* is an invariable or universal generalization in the sense that it consists in unfailing connection between a *probans* and *probandum*

looked upon as attributes predicated of certain subjects rather than as things having such attributes. The Nyāya view is generally in favour of adopting the *intensive* or *connotational* method of interpreting propositions and mostly avoids the *extensive* or *denotational* method. When a proposition like "All S is P" has to be interpreted by a Naiyāyika, he would first think of the universal and invariable connection between the essential attribute connoted by S and that connoted by P and would not so readily think of all the individuals denoted by S and P. It would also be remembered in this connection that there is no fundamental difference between a *vyāpti* of two positive factors and that of two negative factors. In fact, the proposition "Wherever there is no fire, there is no smoke" is for all practical purposes taken by the Naiyāyikas to be equivalent to "Wherever there is negation of fire, there is negation of smoke". A Naiyāyika would have as little hesitation in saying "Negation of fire is" (*vahnyabhāvo'sti*) as in saying "Fire is" (*vahnirasti*), *abhāva* or non-existence being as much a real category as a *bhāva* or positive entity. In these circumstances, one may easily see how Indian Nyāya did not attach much importance in syllogistic reasoning to the artificial distinctions of A, I, E and O propositions, though the Sanskrit language was quite capable of expressing such distinctions, and how the formalistic formulas of different figures and moods came to be almost completely eschewed in Indian logic.

(*a*) *Probans* (*liṅga*=literally, mark) is of three kinds—

concomitant in affirmation and negation (*anvayavyatireki*), concomitant in affirmation alone (*kevalānvayi*) and concomitant in negation alone (*kevalavyatireki*).

(*b*) The *anvayavyatireki* type of *probans* is that which has affirmative concomitance (*anvayavyāpti*) and negative concomitance (*vyatirekavyāpti*) with the *probandum*; as smoke when fire is the *probandum*. "Where there is smoke, there is fire, as in a hearth"—this is affirmative concomitance. "Where there is no fire, there is no smoke, as in a tank"—this is negative concomitance.

(*c*) The *kevalānvayi probans* has affirmative concomitance alone; as—"Jar is namable, because it is knowable, like a cloth". In this instance, negative concomitance is impossible between *knowability* (*prameyatva*) and *namability* (*abhidheyatva*); for all things are knowable and namable.

(*d*) The *kevalavyatireki probans* has negative concomitance alone; as in the syllogism —"Earth is different from the rest (*not-earth*), for it has smell; whichever is not different from the rest (*not-earth*) has no smell, as water; this (earth) is not so—*i.e.*, it does not have absence of smell or *gandhābhāva,* with which the absence of difference from *not-earth* (*pṛthivītarabhedābhāva*) is invariably concomitant (*vyāpya*); therefore, it is not so—*i.e.*, it is not devoid of difference from *non-earth*". In cases like this, there is no example in which the affirmative concomitance "Whichever has smell, has difference from non-earth" may be made out; for all varieties of earth come under the *pakṣa* (subject).

35—T

(*a*) *Pakṣa* (subject) is that in which the presence of the *probandum* is not known for certain and is yet to be proved; as a mountain, when smoke is relied upon as the *probans*.

(*b*) *Sapakṣa* is a similar instance, in which the *probandum* is known for certain; as a hearth, in the same case of inference.

(*a*) *Vipakṣa* is a counter-example in which the non-existence of the *probandum* is known for certain; as a tank, in the same case of inference.

In section 34 of the text given above Annambhaṭṭa explains the three types of *probans* recognized by the Naiyāyikas—*viz.*, the affirmative-negative *probans* (*anvayavyatireki*), the exclusively affirmative (*kevalānvayi*) and the exclusively negative (*kevalavyatireki*). The Advaita-Vedāntins insist that there is only one type of *probans*, viz., *anvayi* (*affirmative*) and that inference arises always through subsumption to an affirmative generalization. The Bhāṭṭas, though they are inclined to recognize the *anvayavyatireki* and *kevalānvayi* types of *probans*, are generally in favour of bringing the *kevalavyatireki* type under a distinct *pramāṇa* called *arthāpatti*. The Mīmāṁsakas maintain that a negative generalization (*vyatirekavyāpti*) is fit to be treated as the basis of a presumptive conclusion (*arthāpatti*) and only an affirmative generalization admits of being treated as the basis of a subsumptive conclusion (*anumiti*). In this connection, it would be desirable to peruse again pages 140 to 146 (part III *supra*), which contain a full discussion of all the important questions relating to *arthāpatti* as a distinct *pramāṇa* and an

explanation of the chief reasons why Naiyāyikas would bring cases of *arthāpatti* under the *kevalavyatireki* type of reasoning.

36—T

(*a*) Fallacious reasons (*hetvābhāsāḥ*=literally, semblances of reason) are of five kinds:—*viz.*, the reason that strays away (*savyabhicāra*), the adverse reason (*viruddha*), the opposable reason (*satpratipakṣa*), the unestablished reason (*asiddha*), and the stultified reason (*bādhita*).

(*b*) The straying reason (*savyabhicāra*) is otherwise known as *anaikāntika* (literally, not unfailing in its association with the *probandum*). It is of three kinds:—*viz.*, common (*sādhāraṇa*), uncommon (*asādhāraṇa*) and non-conclusive (*anupasaṁhārin*).

The *common strayer* (*sādhārāṇa*) is that variety of *straying reason* which is present in a place where the *probandum* (*sādhya*) is not present; as, in the argument—"The mountain has fire, because it is knowable". In this argument *knowability* is

found in a tank where fire is not present. The *uncommon strayer* (*asādhāraṇa*) is that reason which is present only in the subject (*pakṣa*) and not present in any similar example (*sapakṣa*) or counter-example (*vipakṣa*); as *sound-ness* (*śabdatva*), in the argument—"Sound is eternal, because it is sound", *śabdatva* (*sound-ness*) being present only in sound, and nowhere else, eternal or non-eternal.

The *non-conclusive strayer* (*anupasaṁhārin*) is that reason which has no affirmative or negative example (*anvayadṛṣṭānta* or *vyatirekadṛṣṭānta*); as *knowableness* (*prameyatva*) in the argument—"All things are non-eternal, because they are knowable". Here, no example is available since all things are treated as *pakṣa*.

(*c*) The *adverse reason* (*viruddha*) is one which is invariably concomitant with the non-existence of the *probandum*; as producibility (*kṛtakatva*), in the argument—"Sound is eter-

nal, because it is produced". Here producibility is invariably concomitant with non-eternality, which amounts to the non-existence of eternality.

(*d*) The *opposable reason* (*satpratipakṣa*) is one which admits of being counter-balanced by another reason that proves the non-existence of the *probandum*; as audibility in the argument—"Sound is eternal, because it is audible, like soundness (*śabdatva*)". The counter reason in this case is producibility (*kāryatva*) in the counter-argument—"Sound is non-eternal, because it is producible".

(*e*) The *unestablished reason* (*asiddha*) is of three kinds: *viz.*, *unestablished in respect of abode* (*āśrayāsiddha*), *unestablished in respect of itself* (*svarūpāsiddha*) and *unestablished in respect of its concomitance* (*vyāpyatvāsiddha*).

The reason is *āśrayāsiddha* in the argument—"*Sky-lotus* is fragrant, because it is a lotus,

like the lotus of a pond". Here, *sky-lotus* is the abode or subject and it never exists.

The reason is *svarūpāsiddha* in the argument—"Sound is a quality, because it is *visible*, like colour". Here, *visibility* cannot be predicated of sound, which is only audible.

The reason is said to be *vyāpyatvāsiddha* when it is associated with an adventitious condition (*upādhi*). That is said to be an adventitious condition (*upādhi*), which is pervasive of the *probandum* but not pervasive of the *probans*. 'To be pervasive of the *probandum*' means 'never to be the counter-correlative (*pratiyogin*) of non-existence (*abhāva*) which co-exists with the *probandum*'. 'Not to be pervasive of the *probans*' means 'being the counter-correlative of non-existence which co-exists with the *probans*.' In the argument—"The mountain has smoke, because it has fire", *contact with wet fuel* is the adventitious condition (*upādhi*). "Where there is smoke,

there is contact with wet fuel"—thus it is pervasive of the *probandum*. There is no contact with wet fuel in every place where there is fire; for instance, a red-hot iron ball has no contact with wet fuel; thus the *upādhi* is non-pervasive of the *probans*. In this manner, *contact with wet fuel* is the *upādhi* in the present instance, because it is pervasive of the *probandum* but not pervasive of the *probans*. And *fire*, in the argument under reference, is *vyāpyatvāsiddha*, since it is associated with an *adventitious condition* (*upādhi*).

(*f*) The *stultified reason* (*bādhita*) is one which is put forward to prove a *probandum* whose non-existence is established by another proof. "Fire is not hot, because it is a substance", the *probandum* is *'not being hot'*; its reverse—'being hot'—is perceived through tactile perception; so, the *probans* is *stultified* (*bādhita*).

Thus ends the chapter on Inference.

A *hetvābhāsa* is a semblance of reason. It is a fallacious reason or defective reason. It would not be quite correct to use the term *fallacy* as an equivalent of *hetvābhāsa.* In western logic, the term *fallacy* is generally understood in the sense of 'a defective conclusion or interpretation,' resulting from a defective process of thinking. The classification and elucidation of fallacies in western logic are generally influenced in a direct or indirect way by Aristotle's division of fallacies into those which are related to expression and those which are not. Students of western logic are aware that the basis of the Aristotelian classification of fallacies can hardly be considered satisfactory either from the logical or from the rhetorical point of view. As early as in the age of Gautama, the Nyāya system of Indian thought equipped itself with a fairly satisfactory and well-defined scheme of *hetvābhāsa* or *defective probans.* Gautama definitely classifies defective reasons under five heads and uses the significant expression *hetvābhāsa*, which suggests the *fundamentum divisionis* of his classification. The expression *hetvābhāsa* literally means 'a semblance of reason' or 'what appears to be a reason while it is really not such'. The true function of a *hetu* or *probans* is to *prove.* The defects which vitiate a *probans* are called *hetudoṣāḥ.* The common feature of such defects is that they vitiate the probative value of a *probans.* That this common feature—*viz., vitiating the probative value of a prabans*—is the fundamental basis of Gautama's classification of defective reasons is implicitly conveyed by the significant name *hetvābhāsa* used by Gautama. It may be noted

here that the same philosophic instinct, that helped the Nyāya theories of inference and syllogism over the formalistic barriers which western logic still finds it difficult to surmount, has also made it possible for the Nyāya system to equip itself with a really helpful scheme of defective *probans*, hinging on the concept of *hetu* which forms the main ground of syllogistic reasoning. The Naiyāyikas who came after Gautama, more especially later Naiyāyikas like Gaṅgeśa, effectively used the hint afforded by Gautama's classification and clearly and definitely elucidated the principle underlying the Nyāya classification of *hetvābhāsās*. The principle is taken for granted by writers like Annambhaṭṭa and is embodied in the definition of *hetvābhāsa* in general. This definition may be set forth thus:—A defective *probans* (*hetvābhāsa* or *duṣṭahetu*) is a reason whose probative value is vitiated by a circumstance, a valid knowledge of which would prevent the inferential cognition (*anumiti*) kept in view or the efficient cause of such cognition (*anumitikaraṇa*). For instance, a *vyabhicārihetu*, which is of the *sādhāraṇa* type (common strayer), such as 'a jar' in the argument—"The mountain has fire, because it has a jar", is a defective *probans* (*duṣṭahetu* or *hetvābhāsa*) because its probative value is vitiated by the fact that it happens to be present in a place where fire is not present and a valid knowledge of this fact would prevent the generalization (*vyāptijñāna*)—"Wherever there is jar, there is fire". This is a typical case where the efficient cause of inference (*anumitikaraṇa*) is prevented. In an argument like this—"Fire is not hot,

because it is a substance", the *hetu* is of the *bādhita* type (*stultified probans*); in this case, the probative value of the *probans* is vitiated by the fact that it happens to be put forward to prove a thing which is already disproved by perceptual experience; that fire is not cold is a fact established by *pratyakṣa*; and a valid knowledge of the fact that fire is never cold would directly prevent the inference that fire is cold. Thus, it will be seen that a valid knowledge of some vitiating elements (*hetudoṣa*), would directly prevent inferential cognition (*anumiti*) and a valid knowledge of some others like *vyabhicāra* would prevent only the efficient cause of inference (*anumitikaraṇa*), such as generalization, in the form of knowledge of the invariable relation between the *probans* and *probandum*. The Naiyāyikas would insist that it is only a real defect, and not a fancied one, that should be taken to vitiate the probative value of a *probans*. Any erroneous notion that the connection between a valid *probans*, like smoke, and a *probandum*, like fire, is not invariable, should not be held to vitiate the probative value of the *probans*.

Of the three varieties of the vitiating circumstance called *vyabhicāra* (literally, straying away or inconstancy), the first, known as *sādhāraṇa*, is the most important. It generally proceeds from a careless or hasty generalization and when detected, it prevents a valid knowledge of invariable connection (*vyāptijñāna*), The *uncommon strayer* (*asādhāraṇa*) is conceived of by the earlier Naiyāyikas as a reason which is known not to co-exist with the *probandum* in any

sapakṣa, where the *probandum* is recognized to be present. In the illustration of *asādhāraṇa* given in the text, *śabdatva* (*sound-ness*) is present only in the *pakṣa* and nowhere else. According to the earlier Naiyāyikas *asādhāraṇatva* is *anityadoṣa* or operates as a defect only under certain circumstances. They draw a distinction between *nityadoṣa* (permanent defect)—a defect, which, when rightly detected, always vitiates the *probans*, and *anityadoṣa* (occasional defect)—a defect which, when rightly detected, vitiates the *probans* only under certain circumstances. They also hold that *asādhāraṇatva* is an occasional defect (*anityadoṣa*) in the sense that a valid knowledge of its presence vitiates the reason only so long as there is a doubt regarding the presence of the *probandum* in the *pakṣa*. For instance, in the example given in the text, *śabdatva* (*sound-ness*) may be said to be not present in a *sapakṣa*, only so long as there is some doubt regarding the presence of the *probandum* in the *pakṣa*; and if one should be sure of the presence of the *probandum* in the *pakṣa* and still desire to confirm one's knowledge by means of inference, the *probans*—*śabdatva*—cannot be said to be not present in any place where the *probandum* is known for certain to be present, for the obvious reason that the *probans* is present in the *pakṣa*, where the *probandum* is already known for certain to be present. Annambhaṭṭa adopts the view of the earlier Naiyāyikas in this matter. The later Naiyāyikas define *asādhāraṇa* to be a *probans* which is not co-existent with its *probandum* (*sādhyāsamānādhikaraṇaḥ*); and a knowledge of the *non-existence* of the *probans* and the

probandum would prevent a knowledge of their invariable co-existence. The *non-conclusive strayer* (*anupasaṁhārin*) is defective reason which has neither an affirmative example (*anvayadṛṣṭānta*) nor a negative example (*vyatirekadṛṣṭānta*). This is the view of the earlier Naiyāyikas and the illustration given by Annambhaṭṭa in his text is based on this view. In this illustration, all things come under *pakṣa*; when there is doubt regarding the *probandum* everywhere, there can be no certainty concerning the co-existence of the *probans* and the *probandum*, anywhere; thus one cannot have a conclusive knowledge of *vyāpti* in such cases; and this is how, in such cases, the probative value of the *probans* comes to be vitiated. The later Naiyāyikas do not accept this view. They contend that, even when *'all'* are *pakṣas*, those particular cases in which one may be sure of the co-existence of the *probans* and the *probandum*, may well be treated as *dṛṣṭānta*; and so, a *non-conclusive strayer* (*anupasaṁhārin*) should be defined to be a defective *probans*, whose *probandum* happens to be omni-present (*kevalānvayin*). The vitiating circumstance in this case is, according to the later Naiyāyikas, that a knowledge of the negative concomitance (*vyatirekavyāpti*) is prevented; and, in spite of this defect, inferential cognition (*anumiti*) may arise from a knowledge of positive concomitance alone (*anvayavyāpti*).

The adverse *probans* (*viruddha*) and the opposable *probans* (*satpratipakṣa*) should be carefully distinguished. In the case of *viruddha*, the same

probans proves the contrary, the *probandum* being known to be invariably concomitant with the absence of the *probans*. In the case of *satpratipakṣa*, the *probans* admits of being counter-balanced by an opposite *probans*, which may be put forward to prove the contrary. The vitiating circumstance in a *viruddha* is that it prevents inference (*anumiti*). In the case of a *satpratipakṣa*, the two counter-balancing reasons prevent each other from producing the inference connected with it. Some Naiyāyikas hold that, in cases of *satpratipakṣa*, a dubitative type of inferential cognition (*saṁśaya-rūpānumiti*) arises. It will be seen that *viruddhatva* is a more serious defect than *satpratipakṣatva*, for the obvious reason that the former involves a greater degree of carelessness in reasoning.

The unestablished reason (*asiddha*) is defective in that a knowledge of the fact that the *probans* is unestablished prevents a knowledge of the presence of the invariably concomitant *probans* in the *pakṣa* (*i.e.*, prevents *parāmarśa*) in the first two varieties—*viz.*, *āśrayāsiddha* and *svarūpāsiddha*; while, in the third variety—*viz.*, *vyāpyatvāsiddha*, it is defective in that a knowledge of the relation of invariable concomitance (*vyāptijñāna*) is prevented. In connection with the elucidation of the nature of *upādhi*, which is associated with the third kind of *asiddha*, Annambhaṭṭa speaks of four kinds of adventitious circumstance (*upādhi*) in his *Dīpikā*. These four varieties are:—(1) an adventitious circumstance with which, the *probandum*, taken by itself, is concomitant (*kevala-sādhyavyāpakaḥ*); (2) one with which, the *probandum*,

as determined by an attribute of *pakṣa*, is concomitant (*pakṣadharmāvacchinnasādhyavyāpakaḥ*); (3) one with which, the *probandum*, as determined by the *probans*, is concomitant (*sādhanāvacchinnasādhyavyāpakaḥ*); and (4) one with which, the *probandum* is concomitant, as determined by an attribute not belonging to the *pakṣa*, nor being the *probans* (*udāsīnadharmāvacchinnasādhyavyāpakaḥ*). The instance cited in the text, *viz.*, contact with wet fuel (*ārdrendhanasaṁyoga*) is typical of the first variety of *upādhi*. In the argument—"Air is perceptible; because it has touch which is perceptible"—'perceptible colour' (*udbhūtarūpa*) is *upādhi* of the second variety; for, with this *upādhi*, the *probandum*—perceptibility—is invariably concomitant, as determined by the attribute—*being an external substance* (*bahirdravyatva*)—which belongs to the *pakṣa*. In the argument—" Antecedent negation is destructible; because it is producible", *bhāvatva* (*ens-ness*) is *upādhi* of the third variety; for, with this *upādhi*, the *probandum*—destructibility—is concomitant, as determined by the *probans*—producibility. In the argument—"Antecedent negation is destructible; because it is knowable", *bhāvatva* is *upādhi* of the fourth variety; for, with this *upādhi*, the *probandum* is concomitant as determined by producibility, which is neither the *probans* nor any other attribute of the *pakṣa*. In all these four varieties, it will be seen that the *probans* may be present in a place where the *upādhi* may not be present (*i.e.*, *upādhivyabhicārin*); that the *sādhya* (*probandum*), in one of its four forms described above, is invariably associated with the *upādhi*, which

is thus *sādhyavyāpaka*; and that the *probans*, which strays away from the sphere of *sādhyavyāpaka*, must necessarily stray away from the sphere of *sādhya* itself. A thing, whose extent is represented by a circle, which has a portion falling outside the sphere of a second thing represented by a second circle, must necessarily have a portion falling outside the sphere of a third thing represented by a third circle contained within the second circle representing the sphere of the second thing. This relation is embodied in the generalization: "Whichever strays away from the *pervader*, must stray away from the pervaded" (*yo yadvyāpakavyabhicarā sa tadvyabhicārī*). On the basis of this generalization, every case of *upādhi* leads to the inference of *vyabhicāra* and through such inference, prevents a knowledge of *vyāpti*. Some Naiyāyikas hold that the vitiating circumstance in *upādhi* is that the negation of the particular *upādhi* admits of being put forward as a counterbalancing *probans* to prove the contrary and that it leads thus to the inference of *satpratipakṣatva*. These two views are usually expressed thus in Sanskrit:—"*Upādhiḥ vyabhicāronnāyakaḥ*"; "*Upādhiḥ satpratipakṣonnāyakaḥ*".

The defect called *bādha* consists in the negation of the *probandum* being already established by a stronger proof. This defect directly prevents inference (*anumiti*). It is sometimes suggested that it is unnecessary to recognize *bādha* as a distinct defect of the *probans*; for, it may be merged in *vyabhicāra* in cases where the *probans* is known to be present in *pakṣa* which is known

to be devoid of the *probandum*; and it may be merged in *asiddhi* in cases where the *pakṣa* is known to be devoid of the *probans*. It should, however, be remembered that the suggested merger is not possible in certain arguments like this.—"A jar at the first moment of its creation has smell; because it is earth" (*utpattikṣaṇe ghaṭaḥ gandhavān, pṛthivītvāt*); and that, in such cases, the only defect that may be pointed out is *bādha*.

The Vaiśeṣikas recognize only three *hetvābhāsās*—viz., *viruddha* (the *adverse probans*), *asiddha* (the *unestablished probans*) and *saṁdigdha* (the *doubtful probans*). The last corresponds to what the Naiyāyikas call *vyabhicāra*. The *satpratipakṣatva* of the Nyāya system may be brought under *viruddha*, according to the Vaiśeṣikas, and the *bādha*, partly under *saṁdigdha* and partly under *asiddha*.

It is necessary to differentiate the *defective* varieties *of the probans* (*hetvābhāsāḥ*) described above, from what are known in Gautama's Nyāya as *chala*, *jāti* and *nigrahasthāna*. *Chala* is dialectic quibbling mainly through equivocation. *Jāti* is a futile respondence through parity or disparity. Gautama shows at the end of the first *āhnika* of the fifth chapter of *Nyāya-sūtras*, how a debate, carried on exclusively through *jāti*, is bound to become a barren type of dialectic *tu quoque*, leading to nothing. *Nigrahasthāna* is a vulnerable point which makes for defeat in a debate and need not necessarily invalidate an argument. When a person is described as *navakambala* in the sense that he has a new blanket, it would be *chala* to object to the state-

ment by perversely misinterpreting it to mean 'having nine blankets'. It should be noted here that the expression *navakambala* is ambiguous and may mean 'having a new blanket' or 'having nine blankets.' To the argument "Sound is non-eternal, because it is produced, like a jar", it would be a futile respondence (*jātyuttara*) to say "Sound may well be said to be eternal, because it has no activity (*niṣkriya*), like ether". To shift one's ground without adequate reason and give up the thesis proposed to be maintained (*pratijñāhāni* and *pratijñāsaṁnyāsa*), to be unable to give a suitable reply when a reply is called for (*apratibhā*)—weak points like these are vulnerable points (*nigrahasthāna*) which make for defeat in a debate. All the defective varieties of *probans* (*hetvābhāsāḥ*) may also be treated as vulnerable points, while the latter, other than defective reasons, do not invalidate an argument.

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CHAPTER III

ASSIMILATION OR ANALOGY (*upamāna*)

37—T

Assimilation (*upamāna*) is the instrument of assimilative cognition. Assimilative cognition (*upamiti*) consists in the knowledge of the relation between a name and the object denoted by it. Knowledge of similarity is the efficient instrument (*karaṇa*) of such cognition. This may be illustrated thus:—A person happens to be ignorant of the exact meaning of the word *gavaya* (a particular animal of the bovine species). From a forester, he learns that a *gavaya* is similar to a *cow*; he goes to a forest, sees the animal called *gavaya*, which is similar to a cow and recollects the information conveyed by the assimilative proposition (*atideśa-vākya*). Then the assimilative cognition, "This is the animal (of the bovine species) denoted by the word *gavaya*" arises.

Thus ends the chapter on upamāna.

The Nyāya conception of *upamāna* as a distinct instrument of valid cognition restricts its scope to ascertainment of the primary denotative or significative power of a word (*śaktigraha*). The chief object of the Naiyāyikas in so restricting its scope is to save it from being swallowed up in inference (*anumāna*). It should be carefully noted here that, according to the Mīmāṁsakas, the cognition embodied in the proposition "The animal called *gavaya* is similar to a cow" is the efficient instrument (*karaṇa*) and the cognition "My cow is similar to this animal called *gavaya*" is the resultant *upamīti* (assimilative cognition); whereas, according to the Naiyāyikas the resultant *upamiti* is in the form of the knowledge of the primary significative power of the word *gavaya* (*gavayapadaśaktigraha*). It could be easily seen that the relation between the *karaṇa* (efficient instrument) and the *phala* (result), according to the Mīmāṁsakas, is exactly similar to the relation between the two propositions "A is similar to B" and "B is similar to A". The Vaiśeṣikas and Bauddhas could easily show how the latter, *viz.*, "B is similar to A" may be taken to be inferred from the former, *viz.*, "A is similar to B". The Naiyāyikas cleverly escape from this danger by narrowing the scope of *upamāna* as indicated above. One might, however, remark that the Nyāya conception of *upamāna* is singularly unpractical and unfruitful. *Vātsyāyana's* remarks on *upamāna*, under 1-i-6 and II-i-44 to 48, throw some light on the practical value of this *pramāṇa*.

The *Bhāṣyakāra* points out how it would be of great practical value to know exactly what is denoted by certain technical names of medicinal herbs, as used in the Āyurveda literature. It should be remembered here that the Indian view of a *pramāṇa* is that it is an efficient instrument of valid knowledge, which possesses such unchallenged certitude as is usually associated with validity or as is not nullified by subsequent experience; or according to some Indian thinkers, it is an efficient instrument of valid knowledge, which possesses such practical utility and effectiveness as is usually associated with validity. In this way, it would not be difficult to appreciate the reasons why the Naiyāyikas regard *upamāna* as a distinct *pramāṇa*.

CHAPTER IV

VALID VERBAL TESTIMONY. Sentence or proposition (*śabdha*)

38—T

(*a*) Valid verbal testimony is a proposition set forth by a trustworthy person (*āpta*). One who habitually speaks only truth is a trustworthy person (*āpta*). A sentence or proposition is a group of words like "Bring a cow" (*gāmānaya*).

(*b*) A word is that which has significative potency (*śakti*). "From this word, this concept should be known"—God's will to this effect (*Īśvarasaṁketaḥ*) is called *śakti* (significative potency).

The Vaiśeṣikas would bring valid verbal testimony also under inference. The Naiyāyikas however, contend that, in cases where valid knowledge is derived from valid verbal testimony (*pramāṇaśabda*), one is not conscious of any conclusion through subsumption to a generalization; but one is, on the contrary, conscious of a valid verbal cognition or judgment (*śābdabodha*) resulting from a knowledge of words, without the mediacy of any such subsumptive process of

thought. For this reason, the Nyāya system holds that *śabda* deserves the rank of a distinct *pramāṇa*.

The recognition of *śabda* as a distinct *pramāṇa* has laid most of the Indian systems of philosophy open to the charge of dogmatism. Careful students of Indian philosophy know well that this charge, when put forward in a sweeping form, can easily be exposed as based on certain misapprehensions. Certain objections may be raised by advocates of independent thinking against the view of the Mīmāṁsakas that the relation between a word and its meaning is eternal and that the statements constituting the Vedas should be held to be eternal and eternally valid and to possess self-evident validity. But these objections cannot be raised against the Nyāya view of *śabdapramāṇa*. This view seeks to reconcile the Nyāya stand point of *rationalism* with the conception of *śabda* as a distinct source of valid knowledge, through the Nyāya theory of extrinsic validity (*parataḥprāmāṇya*). According to the Naiyāyikas, it should be remembered that a *śabda* is a source of valid knowledge only in so far as the source of *śabda* is a perfectly trustworthy person and that validity (*pramātva*) of the knowledge derived from a *śabda* is extrinsically caused (*parataḥ utpadyate*) through the reliability of the speaker and is also extrinsically made out (*parataḥ jñāyate*) through verification in direct experience. The Naiyāyikas seek to gain a twofold advantage by this view of *śabda*. One advantage consists in the fact that they have succeeded in freeing their rationalistic system of thought from the

reproach of dogmatism; and the other advantage consists in the fact that they are able to base a theistic argument on this view by pointing out that belief in the infallibility of the *Veda* would necessarily imply a belief in the *Veda* having been produced by an infallible author—such an infallible author in the case of *Veda* being none other than the *Omnipotent and Omniscient God*.

The primary significative potency of a word, called *padaśakti,* is the eternal significative relation between a word and its sense, according to the Mīmāṁsakas; and it should be brought under *śakti,* which is a distinct category or quality according to them. The Naiyāyikas refuse to accept this view and hold that the utmost that could be said about *padaśakti* is that it is the *will* of God to the effect that a particular word should convey a particular sense. This is on the assumption that speech is not a human product but made by God for the benefit of humanity.

39—T

(*a*) Vebal expectancy, congruity and proximity—these are the causes which bring about verbal cognition or judgment from a proposition.

(*b*) Verbal expectancy (*ākāṅkṣā*) consists in a word not being capable of conveying a complete judgment in the absence of another word.

(*c*) Congruity (*yogyatā*) consists in the sense being not stultifiable.

(*d*) Proximity (*sannidhi*) consists in the articulation of words without undue delay.

(*e*) A sentence which is devoid of expectancy and the other two requirements (congruity and proximity) does not bring about a valid cognition. For instance, a string of words like "Cow, horse, man, elephant" does not produce any judgment; for there is no verbal expectancy (*ākāṅkṣā*) here. The sentence "One should sprinkle with fire" does not produce a valid judgment, as there is no congruity here. Words like "Bring a cow", uttered at long intervals, cannot produce a valid judgment, owing to want of proximity.

In section 39, Annambhaṭṭa briefly states the Nyāya view regarding the accessories necessary for arriving at a valid judgment from a proposition. In every language, certain words necessarily require certain other words to complete the sense. For instance, a verb denoting an action necessarily requires a *kāraka*

such as a word denoting the agent or instrument or object of the action; and in the absence of such a word, it cannot convey a complete sense. This kind of syntactic need is what is called verbal expectancy or *ākāṅkṣā*. Words which are not required for syntactic completeness or which have no kind of syntactic relation whatever cannot form a proposition. *Yogyatā* or congruity of the sense is stated to be another requirement. One can easily see that, in the example given in the text, the concept of *fire* is incongruous as a means of sprinkling; because sprinkling is done with *water*, and not with fire. When the words constituting a sentence are uttered at long intervals, one cannot have any connected thought and complete judgment in the form of verbal cognition does not arise. With regard to the causal connection between *yogyatā* and *śābdabodha*, there is difference of opinion among the Naiyāyikas. Many Naiyāyikas hold that a decisive knowledge of congruity (*yogyatāniścaya*) is a pre-requisite of verbal cognition. Some of them maintain that a decisive knowledge of incongruity (*ayogyatāniścaya*) prevents verbal cognition (*śābdabodhapratibandhaka*) and the absence of such a counteracting agent is necessary for having the effect.

In this connection, attention may be drawn to the relation between a decisive knowledge of the speaker's intention (*tātparyaniścaya*) and the verbal cognition (*śābdabodha*) arising from a sentence. Some hold that *tātparyaniścaya* is an accessory cause of *śābdabodha*; others hold that it is required only in cases where ambiguous words or expressions are used; and

yet others maintain that, though it is required, it need not be referred to separately as a cause of *śābdabodha*, for the reason that *ākāṅkṣā* (syntactic expectancy) consists in the need which one word has for another word in order to convey the complete sense *intended* to be conveyed and that, in this form, *ākāṅkṣā* includes *tātparya*.

Students of Nyâya will do well to note the essential features of the Nyāya theory of *śābdabodha*. This theory is, for all practical purposes, the Nyāya theory of the import of propositions. The Nyāya view is that only a determinate judgment (*savikalpakajñāna*) is embodied in, and conveyed by, a proposition; every proposition comprises at least a subject (*uddeśya*) and predicate (*vidheya*); in a verbal judgment (*śābdabodha*) arising in the hearer's mind from a proposition, the meaning of the chief substantive in the nominative case (*prathamāntārtha*) plays the role of the leading concept (*mukhyaviśeṣya*) and all the other concepts are directly or indirectly subordinated to it; the cognition arising from a proposition is always non-perceptual (*parokṣa*); and the additional element conveyed by a sentence, over and above the separate concepts conveyed by separate words, is the intended relation of the concepts (*padārthasaṁsarga*) and this additional element, which is the distinctive feature of a verbal judgment (*vākyārtha*), is conveyed through the particular juxtaposition of words (*saṁsargamaryādā*), and not through a primary or secondary significative power of words (*abhidhā* or *lakṣaṇā*). It may be observed here that the juxtaposition (*saṁsargamar-*

yādā), referred to here, turns out to be identical with co-utterance (*samabhivyāhāra*), which is reducible to the form of what is technically known as syntactic expectancy (*ākāṅkṣā*).

It may be useful here to contrast the Nyāya theory of *śābdabodha* with the *śābdabodha* theories of certain other Indian schools. According to the *Vaiyākaraṇas*, the activity denoted by the root of the finite verb (*dhātvartha*) is the leading concept in a verbal cognition arising from a sentence; and according to the Bhāṭṭas, the '*will to do*' (*kṛti*) denoted by the ending of the finite verb is the leading concept there. If, from the stand-point of logical analysis, the *subject* is the central concept of a judgment, the meaning of the root of the finite verb may be regarded as its central concept from the stand-point of linguistic analysis; or the '*will to do*', denoted by the ending of the finite verb, may be viewed as its central concept from the stand-point of Mīmāṁsā legalism.

The Nyāya system recognizes only two main types of significative force (*śabdavṛtti*)—*viz.*, *abhidhā* (the primary significative force) and *lakṣaṇā* (the secondary significative force). It refuses to accept the third type of significative force called *vyañjanā* or suggestion, which is recognized by the Ālaṁkārikas as a distinct type of *śabdavṛtti*, and brings it under inference. According to the Nyāya system, the primary significative force (*abhidhā*) includes two phases, which correspond to *connotation* and *denotation*, and relate to *jāti* (generality) as the connoted attribute, and to *vyakti* (the individual thing) as the denoted object qualified

by such attribute. In other words, the Naiyāyikas generally maintain that the primary sense of a word is ordinarily an individual qualified by a generic attribute (*jātiviśiṣṭavyakti*). Students of modern philosophy will find it easy to see that, according to the Nyāya system, the *concepts* conveyed by separate words are *apparent simples*, but really *petrified judgments*. All the names, including proper names, are connotative, according to Nyāya.

40—T

(*a*) There are two classes of sentences: those that belong to the *Veda* and those that belong to secular speech. Those that belong to the *Veda* are all statements of God and therefore authoritative. Of those that belong to secular speech, such as produced by trustworthy persons are authoritative and others are not authoritative.

(*b*) Verbal cognition (*śābdajñāna*) is the knowledge of the meaning of a sentence. Its efficient instrument (*karaṇa*) is sentence (*śabda*).

Here ends the chapter on Verbal Testimony.

Thus valid experience (*yathārthānubhava*) has been explained.

41—T

(*a*) Erroneous experience is of three kinds—the three varieties being doubt, misapprehension and indirect argument (*reductio ad absurdum*).

(*b*) A doubt is a cognition which relates to several incompatible attributes in the same thing—as, in the dubitative cognition—"It may be a post or a man".

(*c*) Misapprehension is a false cognition—as in the erroneous cognition of a nacre, in the form—"This is silver".

(*d*) Indirect argument (*reductio ad absurdum*) consists in the hypothetical admission of *vyāpya* (an invariably concomitant fact) which leads to the admission of the pervasive concomitant (*vyāpaka*); as, "If there were no fire, there would be no smoke".

42—T

Recollection is also of two kinds:—true and false. The former is the result of a valid experience; and the latter arises from an erroneous experience.

In this connection students may be advised to read again pages 104 to 146 of chapter I part III.

43—T

(*a*) Pleasure is a quality which all consider agreeable.

(*b*) Pain is a quality which all consider disagreeable.

(*c*) Desire is *wish*.

(*d*) Dislike is *ill-feeling*.

(*e*) Volitional effort is *the will to do*.

(*f*) *Dharma* is the unseen spiritual benefit accruing from the performance of actions which are enjoined by the Vedic law.

(*g*) *Adharma* is the unseen spiritual demerit accruing from the performance of forbidden actions.

(*h*) Cognition and the following seven qualities (eight in all) are the specific qualities (*viśeṣaguṇāḥ*) found only in the soul. Cognition, desire and volitional effort may be eternal or non-eternal; they are eternal in God and non-eternal in the ordinary souls of living beings (*jīva*).

(*i*) There are three kinds of tendencies or impressions—speed, reminiscent impression and elasticity. Speed belongs to the substances—earth, water, fire, air and mind. Reminiscent impression belongs only to the soul and it results from a previous experience and causes recollection. Elasticity is the tendency of a thing to recover its original form when it is changed.

Here ends the section dealing with Qualities.

It would be useful if students read again, in this connection, pages 13 to 15 of chapter I part III.

44—T

Activity is of the nature of motion. Upward motion leads to contact with an upper place. Downward motion leads to contact with a lower place. Contraction leads to contact with a place near one's body. Expansion leads to contact with a place remote from one's body. All the other varieties of motion come under '*going*'.

45—T

Generality is a generic attribute which is *eternal* and *one* and inheres in many things. It is found in substances, qualities and activities. Existence (*sattā*) is the most comprehensive type of generality. *Substance-ness* and such others are less comprehensive.

46—T

Specialities are the differentiating features belonging to eternal substances.

47—T

Inherence is the eternal relation, which belongs to the inseparables. An *inseparable* pair consists of two things of which one thing, so long as it does not come to an end, exists only in the other thing:—as *component part* and the *composite whole*, *quality* and *substance*, *motion* and *moving body*, *generality* and *the individual having it*, and *speciality* and *the eternal substance having it*.

In this connection, students will do well to read again pages 18 to 37 of chapter I, part III.

48—T

(*a*) Antecedent non-existence has no beginning but has an end. It relates to the period preceding the production of an effect.

(*b*) Annihilative non-existence has a beginning but has no end. It relates to the period subsequent to the production of an effect.

(*c*) Total non-existence is the negation of a counter-correlative in respect of relation to all the three times—present, past and future—as in the statement—"There is no jar on this spot"

(*d*) Reciprocal non-existence is the negation of a counter-correlative in respect of its identity with another thing—as in the statement—"A jar is not a cloth".

Here, students should peruse again pages 37 to 52 of chapter I, part III.

49—T

All the other *padārthas* may be brought under one or the other of the seven *padārthas*

enumerated at the beginning of this work. So, there are only seven categories.

Here, attention is drawn to pages 4 to 8 of chapter I, part III.

50—T

Annambhaṭṭa has written this treatise called *Tarkasaṁgraha* with the object of introducing beginners to a study of the Nyāya and Vaiśeṣika systems of Gautama and Kaṇāda.

THUS ENDS THE TARKASAMGRAHA

——

SANSKRIT GLOSSARY

akhaṇḍadeśa: indivisible space.
akhaṇḍopādhi: an attribute which is not a jāti but similar to it.

akhyāti: non-apprehension.
acit: non-spirit; matter.
aṇu: atom; minute part.
aṇutva: smallness.
aṇuparimāṇa: atomic size.
atideśavākya: assimilative proposition.
ativyāpti: over-applicability; being too wide.
atyantābhāva: absolute non-existence.
atyantāsat: non-being out-and-out.
adharma: unseen spiritual demerit.
adhikārin: a qualified person or one to whom the result accrues.

adhiṣṭhāna: real substratum.
adhyavasāya: determinative cognition.
anavasthā: endless regression.
anātman: non-soul.
anādi: without beginning.
anitya: non-eternal.
anityadoṣa: occasional defect.
anirvacanīyakhyāti: indefinable's apprehension.
anirvacanīyatā: indefinability.
anudbhūta: sub-perceptional.
anupasaṁhārin: non-conclusive reason.

anubhava: experience.
anumāna: inference; instrument of inference.
anumiti: inference.
anuyogin: correlated substratum.
anuvyavasāya: after-cognition, in which the subject also is presented.
anuṣṇāśīta: lukewarm.
antaḥkaraṇa: inner instrument of knowledge.
antyaviśeṣa: ultimate particularity.
anyathākhyāti: misapprehension.
anyathāsiddha: dispensable antecedent.
anyonyābhāva: reciprocal negation; mutual non-existence.
anvayadṛṣṭānta: affirmative example.
anvayasahacāra: sequence of positive factors.
anvayavyatirekin: concomitant in affirmation and negation.
anvayavyāpti: positive or affirmative concomitance.
ap: water.
apara: less comprehensive.
aparatva: spatial or temporal proximity.
apavarga: final emancipation.
apekṣābuddhi: enumerative cognition.
apratyakṣa: imperceptibility.
aprāmāṇya: error; invalidity.
abhāva: non-existence.
abhidheya: denotable thing.
abhidheyatva: namability.
abhighāta: striking; a kind of contact producing sound.

abheda: identity.
abhyāsapratyaya: repetitional cognition.
amla: acid.
ayathārtha: erroneous.
ayathārthānubhava: erroneous experience.
ayutasiddha: inseparable.
araṇi: tinder-stick.
artha: substance.
arthāpatti: presumptive testimony.
alaukika: extra-normal.
avakṣepaṇa: downward motion.
avacchedaka: delimiting.
avacchedya: delimited.
avacchinna: delimited.
avayava: member; member of a syllogism; component part.
avayavin: composite structure or product.
avinābhāva: invariable relation.
aviveka: non-discrimination.
avyapadeśya: non-verbal; unverbalisable.
avyāpti: partial inapplicability.
avyāpyavṛtti: non-pervasive.
aśakti: inability.
asat: non-being.
asatkhyāti: non-being's apprehension.
asamavāyikāraṇa: non-inherent cause.
asambhava: total inapplicability.
asādhāraṇa: special; uncommon strayer.
asādhāraṇadharma: specific feature.
asiddha: un-established reason.
asurabhi: non-fragrant.

ākaraja : mine-born ; born of the mine.
ākāṅkṣā : verbal expectancy; syntactic expectancy.
ākāśa : ether.
ākāśatva : etherness.
ākuñcana : contraction.
āgama ; verbal testimony.
ātman : soul.
ātmakhyāti : self-apprehension.
ātmāśraya : self-dependence.
ādarapratyaya : regardful cognition.
Āditya : Sun.
ānumānika : inferential.
āpta : trustworthy person ; truth-teller.
āyojana : concretive activity.
ārambhavāda : creationistic theory of causation.
āropa : hypothetical admission.
āśrayāsiddha : unestablished in respect of abode.
icchā : desire.
indriya : sense-organ.
indriyatva : senseness.
indriyārthasannikarṣa : relation between sense-organ and object.
indhana : fuel.
Īśvara : God.
utkṣepaṇa : upward motion.
utpatti : production.
udarya : that of the stomach ; gastric.
udāharaṇa : exemplification.
uddeśa : enumeration.
uddeśya : subject.
udbhūta : perceptible ; not sub-perceptional.

upanaya: subsumptive correlation.
upamāna: instrument of assimilation; assimilative instrument; comparison.
upamiti: assimilative cognition or experience.
upalabdhi: apprehension.
upaṣṭambhaka: supportive.
upasthiti: thought.
upādānakāraṇa: material cause.
upādhi: adventitious condition; an attribute which is not a jāti.
upekṣā: indifference.
uṣṇa: hot.
uṣṇasparśa: hot touch.
eka: one.
kaṭu: pungent.
kadamba: a kind of flower.
kapāla: potsherd.
kapiśa: brown.
kampana: shaking.
karaṇa: efficient or instrumental cause.
karma: activity.
kalaśatva: jarness.
kalpanā: presumptive knowledge; fictitious fabrication.
kaṣāya: astringent.
kāma: wish.
kārya: product.
kāla: time.
kālikasambandha: time-relation.
kṛtakatva: producibility.
kṛti: volitional effort.
kṛṣṇatārā: dark pupil.

kevalabhūtala : empty floor.
kevalavyatirekin : concomitant in negation alone.
kevāladhikaraṇa : mere container.
kevalānvayin : concomitant in affirmation alone.
kriyā : activity.
kriyātva : motion-ness.
krodha : ill-feeling.
kṣaṇa : moment.
kṣaṇikavijñāna : momentary consciousness.
gandha : smell.
gamana : going.
guṇa : quality.
gurutva : weight.
ghaṭatva : potness.
ghrāṇa : olfactory sense; sense of smell.
cakṣus : visual sense; sense of sight.
calana : motion.
cit : spirit; consciousness.
citra : variegated.
cūrṇa : powder.
chala : dialectic quibbling.
janya : producible thing.
japā : China rose.
jala : water.
jalpa : argument for victory; successful advocacy.
jāti : generic or class attribute; specious and unavailing objections or futile respondence.
jihvā : tongue.
jīva : individual soul.
jīvātman : individual soul.
jñapti : knowledge.

jñāna: knowledge.
jñeya: knowable thing.
tattvādhyavasāya: conclusive determination of truth.
tadutpatti: casuality.
tantu: thread.
tamas: darkness.
tarka: *reductio ad absurdum*; indirect argument.
tādātmya: complete identity.
tikta: bitter.
turī: shuttle.
tṛṇa: straw.
tejas: light; fire.
trasareṇu: triad; ternary product.
truṭi: triad; ternary product.
tvak: *tactus*; sense of touch.
daṇḍa: stick.
dik: spatial direction.
divya: that of the sky.
dīrgha: long.
duṣṭahetu: defective probans.
duḥkha: pain.
dṛṣṭānta: typical instance.
dravatva: fluidity.
dravya: substance.
dravyatva: substanceness.
dvyaṇuka: dyad; binary product.
dveṣa: dislike.
dharma: merit; unseen spiritual benefit; attribute.
dharmin: thing qualified.
dhātu: verbal root.
dhṛti: sustaining effort.

dhvani: noise.
nāman: name.
nigamana: conclusion.
nigrahasthāna: vulnerable point.
nitya: eternal.
nityadoṣa: permanent defect.
nityaguṇa: eternal quality.
nididhyāsana: constant meditation.
nimittakāraṇa: instrumental cause.
niyata: invariable.
niyatapūrvavṛtti: invariable antecedent.
nirūpaka: correlating; correlated.
nirṇaya: decisive knowledge.
nirvacana: definite predication.
nirvikalpaka: indeterminate.
niścaya: determination.
niṣkampapravṛtti: unfaltering effort.
nīla: blue.
nodana: pushing.
naimittika: artificial.
pakṣa: minor term; subject.
pakṣatā: subjectness.
pakṣadharmatā: subject-adjunctness.
paṭa: cloth.
paṭatva: clothness.
paṭupratyaya: vivid cognition.
padārtha: category.
para: more comprehensive.
paratva: temporal or spatial remoteness.
paratastva: extrinsicality.
paratahprāmāṇya: theory of extrinsic validity.

paratogrāhya: made out extrinsically.
paramāṇu: atom.
paramātman: Supreme Soul.
paramparāsambandha: indirect relation.
parāmarśa: subsumptive reflection.
parārthānumāna: inference for others.
parārdha: one thousand crores of crores.
pariṇāma: modification; digesting.
parimāṇa: size.
parīkṣā: investigation.
parokṣa: non-perceptual.
pāka: heat; baking.
pācaka: a cook.
pārimāṇḍalya: the smallest size conceivable; atomic size.
pāṣāṇa: stone.
piṇḍa: lump.
pīta: yellow.
puruṣa: spirit.
pṛthaktva: separateness.
pṛthivī: earth.
pṛthvī: earth.
prakāra: adjunct.
prakāratā: adjunctness.
prakāśa: luminosity.
prakṛti: primordial matter.
pracaya: loose contact.
pratijñā: thesis.
pratipādyapratipādakabhāva: relation of the treated and the treatise.
pratibandhaka: counter-agent.

pratiyogin: correlative; counter-correlative.
pratiyogitā: correlativeness.
pratiyogitātva: the state of being correlativeness.
pratyakṣa: perception; perceptive instrument.
pradhvaṁsābhāva: annihilative non-existence.
pramā: valid knowledge.
pramāṇa: means of valid knowledge; valid knowledge.
pramātva: validity.
prameya: object of valid knowledge; cognizable thing.
prameyatva: knowability.
prayatna: volition.
prayojana: purpose; aim.
pralaya: dissolution; universal dissolution.
pravṛtti: volitional decision.
prasāraṇa: expansion.
prāgabhāva: antecedent non-existence.
prātyakṣika: perceptual.
prāmāṇya: truth; validity.
pretyabhāva: cycle of death and birth.
phala: result.
phalībhūtajñāna: resultant cognition.
baddha: bound.
bādhakapratīti: sublating cognition.
bādhita: stultified reason.
buddhi: cognition.
bhāvakārya: positive product.
bhāvanā: reminiscent impression.
bhāvapadārtha: existent entities.
bhāsvara: brilliant.
bhitti: wall.
bhūta: elemental being.

bhūtatva: elementness.
bhuyodarśana: repeated observation.
bheda: difference.
bhedasahiṣṇu: compatible with difference.
bhauma: that of the earth.
maṇi: lens.
madhura: sweet.
manas: mind.
manana: reflective thinking.
manuṣyatva: humanity.
mahat: large.
mahattva: largeness.
mahākāla: undivided time.
mahāsāmānya: grand generality; the *summum genus*.
māna: measurement.
mānasapratyakṣa: mental perception.
mithyā: unreal.
mithyājñāna: false cognition.
mukti: final emancipation.
mūrta: moving substance; limited in size.
mṛgatva: beasthood.
mṛt: clay.
yatna: volitional effort.
yathārtha: real.
yogyatā: congruity.
yogyānupalabdhi: effectual non-cognition.
rakta: red.
rajas: passion.
rasa: taste.
rasana: sense of taste; gustatory sense.
rūpa: colour.

rūpatva: colourness.
lakṣaṇa: definition.
lavaṇa: salt.
lāghava: principle of parsimony or economy.
liṅga: probans; mark; reason.
liṅgaparāmarśa: subsumptive reflection of the probans.
loka: world.
Varuṇa: Water-God.
varṇa: alphabet.
vahni: fire.
vākyārthabodha: verbal judgment.
vāda: argument for truth.
vāyu: air.
vāyuloka: world of Wind-God.
vikalpa: fictitious fabrication.
vijñāna: consciousness.
vitaṇḍā: destructive argument or objection.
vidyut: lightning.
vidheya: predicate.
vipakṣa: counter-example.
viparītakhyāti: contrary experience.
viparyaya: misapprehension.
vibhāga: division; disjunction.
vibhāgaja: caused by disjunction.
vibhudravya: all-pervasive substance.
viruddha: adverse probans or reason.
viśiṣṭapratīti: determinate cognition.
viśeṣa: particularity.
viśeṣaguṇa: specific quality.
viśeṣaṇa: adjunct.
viśeṣyatā: substantiveness.

viṣaya: object; subject-matter.
viṣayatā: objectness.
viṣayatātva: the state of being objectness.
viṣayitā: subjectness.
vṛkṣa: tree.
vṛtti: activity; modification.
vega: speed.
veman: loom.
vyakti: individual unit.
vyañjanā: suggestion.
vyatirekadṛṣṭānta: negative example.
vyatirekavyāpti: negative concomitance; negative generalization.
vyatirekasahacāra: concomitance of negation.
vyavasāya: cognition in which an object is presented and not the subject.
vyāpāra: activity; intermediate cause.
vyāpti: co-extension; invariable concomitance.
vyāpyatvāsiddha: unestablished in respect of its concomitance.
vyāpyavṛtti: pervasive.
vyāvartaka: differentiating feature.
vyāvṛtti: differentiation.
vyāsajyavṛtti: partially contained.
śakti: significative potency or power; potentiality.
śabda: proposition; verbal testimony; sound.
śabdaja: caused by sound.
śabdatanmātra: subtle sound.
śabdavṛtti: significative force.
śarīra: body; form.
śābda: verbal; verbal experience.

śābdajñāna: verbal cognition.
śābdabodha: verbal cognition.
śīta: cold.
śītasparśa: cold touch.
śukti: nacre.
śukla: white.
śyāma: black.
śravaṇa: understanding.
Śruti: Revealed Texts.
sakampapravṛtti: halting effort.
sakṛddarśana: single observation.
sat: being.
sattā: existence.
sattva: goodness.
satpratipakṣa: opposable reason.
sapakṣa: similar instance.
samavāya: inherence.
samavāyin: constitutive.
samavāyikāraṇa: constitutive or inherent or intimate cause.
samudra: ocean.
samūhālambana: group cognition.
saṁkhyā: number.
saṁdigdha: doubtful probans.
sannikarṣa: sense-relation.
sannidhi: proximity.
sambandha: relation.
saṁyoga: conjunction.
saṁyogaja: caused by contact.
saṁśaya: doubt.
saṁsarga: relation.

saṁsargatā: relationness.
saṁskāra: tendency or impression; reminiscent impression.
sarit: river.
Sarvajña: Omniscient.
savikalpaka: determinate.
savyabhicāra: straying reason.
sānta: having an end.
sādṛśya: similarity.
sādhana: middle term; probans.
sādhāraṇa: general; common strayer.
sādhya: probandum; major term.
sāmagrī: the whole causal apparatus.
sāmayikābhāva: temporary non-existence.
sāmānya: generality.
sāmānyaviśeṣa: generic differentia.
sāṁkarya: unwarranted blend.
sāṁsiddhika: natural.
siddhānta: established conclusion.
sukha: pleasure.
surabhi: fragrant.
suvarṇa: gold.
sṛṣṭi: creation.
sthitasthāpaka: elasticity.
sneha: viscidity.
sparśa: touch.
sphaṭika: crystal.
sphoṭa: the eternal substratum of significativeness.
smṛti: recollection.
smaraṇa: recollection.
svatastva: intrinsicality.

svatogrāhya: intrinsically made out.
svatojanya: intrinsically brought about.
svatovyāvartaka: self-discriminating.
svatovyāvṛtta: self-differentiated.
svarūpasambandha: self-relation; self-linking.
svarūpāsiddha: unestablished in respect of itself.
svārthānumāna: inference for oneself.
svetarabheda: difference from the rest.
harita: green.
hetu: probans; reason; valid reason; middle term.
hetvābhāsa: fallacious reason; semblance of reason; defective probans.
hrasva: short.

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PRINTED AT THE MADRAS LAW JOURNAL PRESS, MYLAPORE, MADRAS.